Memoirs

OF THE

British Astronomical Association.

VOL. XV.

SIXTH REPORT OF THE SECTION

FOR THE OBSERVATION OF

VARIABLE STARS.

Director—Col. E. E. Markwick, C.B., F.R.A.S.

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EDITED BY

F. W. LEVANDER, F.R.A.S.

REPORTS

OF THE

OBSERVING SECTIONS.

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CONTENTS.

SECTION FOR THE OBSERVATION OF VARIABLE STARS.

DIRECTOR—COL. E. E. MARKWICK, C.B., F.R.A.S.

SIXTH REPORT OF THE SECTION, 1900-1904.

PREFACE.

This Memoir contains the observations of twenty-six "long period" and two "irregular" variables by members of the Section and a few others, being made principally in the five years 1900 to 1904 inclusive. A small proportion of the observations, chiefly by the Director, were made prior to that period: as they formed part of the same series, it was thought well to include them.

Following is a list of those who have contributed observations. Against each observer is shown in brackets the abbreviation adopted for the name, the locality, and instruments in use, excluding the binocular, which is more or less common property.

Observer.	Locality.	Instrument.
Astbury, T. H. . . . (Ast.)	Wallingford	2-in. and 3¼-in. O.G.
Backhouse, T.W., F.R.A.S. (B.)	Sunderland	4¼-in. O.G.
Besley, (the late) W. E. . (Be.)	Clapham	1⅝-in. O.G.
Brook, C. L., M.A., F.R.A.S., etc. . . . . (Br.)	Meltham	9¼-in. spec.
Child, J. W. L., F.R.A.S. . (Ch.)	Wimbledon	12-in. and 8½-in. spec., 2-in. O.G.
Corder, H. . . . . (Co.)	Bridgwater	6½-in. spec.
Field, J. M. . . . (Fd.)	Edinburgh	13-in. spec. and 6-in. O.G.
Kelly, J. . . . . (Ke.)	Kingstown, Co. Dublin	3-in. O.G.
Killip, Rev. R., F.R.A.S. . (Kp.)	Liverpool	5-in. O.G.
King, A. . . . . (Ki.)	Leicester	2⅜-in. O.G.
Le Beau, O. A. . . . (Le B.)	Bedford and Edinburgh	1-in. and 2-in. O.G.
Markwick, Col. E. E., F.R.A.S. . . . (Ma.)	Devonport and Salisbury	2¾-in. O.G.
Middleton, G. W. . . (Mi.)	Mexborough	2¼-in. O.G.
Moye, Prof. M. . . . (My.)	Montpellier	...
Oakes, Walter . . . (Oa.)	London	2-in. and 3-in. O.G.
Orr, Miss M. A. . . . (Or.)	Frimley, etc.	3-in. O.G.
Peridier, J. M. . . . (Pe.)	Paris	5¼-in. spec. and 1¾-in. O.G.
Ryves, P. M. . . . (Ry.)	Topsham, etc.	1⅝-in. and 3-in. O.G.
Williams, Rev. L. A. . (Wm.)	Stokewake	2¾-in. O.G.
Worssell, W. M. . . (Wl.)	Arundel and S. Africa	6½-in. spec.
Wood, J. T. . . . (Wd.)	Nottingham	...

The next table shows the distribution of work among the observers.

Star.			Be.	Br.	Ch.	Co.	Ke.	Ki.	Le B.	Ma.	Mi.	My.	Oa.	Or.	Pe.	Ry.	Wm.	Wl.	Total.
Chandler's Number.	Name.																		
112	R	Andromedæ .	...	4	54	45	14	...	25	63	...	...	...	17	2	...	...	2	226
782	R	Arietis .	...	37	33	...	...	...	10	58	...	...	...	8	...	...	...	2	148
806	o	Mira Ceti .	...	11	14	32	...	...	...	70	...	6	...	49	...	...	1	23	206
1855	R	Aurigæ .	...	...	20	34	...	...	...	19	...	...	...	...	1	...	...	...	74
2100	U	Orionis .	...	...	21	57	11	...	1	117	12	...	...	23	...	13	...	41	296
2213	η	Geminorum .	20	...	66	...	...	5	12	54	...	...	22	13	3	...	...	22	217
3493	R	Leonis .	...	15	48	28	30	22	...	107	10	...	3	38	...	...	...	30	331
3825	R	Ursæ Majoris .	...	...	92	53	11	...	4	114	2	...	...	1	2	...	...	...	279
4511	T	,, .	...	...	46	53	7	...	...	100	...	...	...	...	11	...	4	...	221
4557	S	,, .	...	...	77	57	4	...	2	115	2	...	...	7	7	...	4	3	278
4826	R	Hydræ .	...	...	...	11	...	...	...	18	...	...	...	1	...	...	...	...	30
4847	S	Virginis .	...	...	1	10	2	...	...	14	...	...	...	1	...	...	...	...	28
5237	R	Bootis .	...	...	19	...	9	...	...	59	...	...	...	11	...	...	...	...	98
5504	S	Coronæ .	...	...	50	30	11	...	...	65	...	...	..	15	...	...	...	...	171
5667	R	,, .	...	...	38	23	36	...	...	168	3	...	26	42	69	13	...	60	478
5677	R	Serpentis .	...	...	13	31	14	...	...	86	...	...	...	25	...	...	...	...	169
5758	X	Herculis .	...	...	46	...	61	12	...	133	...	...	...	22	36	...	...	43	353
5955	R	Draconis .	...	...	35	52	...	...	...	56	...	...	...	9	10	...	...	...	162
6044	S	Herculis .	...	...	24	...	...	5	...	72	...	...	...	10	...	...	...	...	111
6512	T	,, .	...	...	35	...	...	...	1	59	...	...	...	12	15	...	...	...	122
6733	R	Scuti .	...	...	55	19	67	2	5	102	1	...	...	25	...	...	...	34	310
6849	R	Aquilæ .	...	...	7	26	23	...	...	120	...	...	...	6	...	...	...	...	182
7045	R	Cygni .	...	...	47	47	...	...	..	47	...	...	...	1	...	...	...	...	142
7120	X	,, .	...	26	54	42	54	5	21	183	15	22	16	19	44	...	7	...	508
7609	T	Cephei .	...	...	57	64	10	...	14	59	...	...	8	12	...	...	...	...	224
7754	W	Cygni .	...	...	68	...	...	1	...	26	...	...	...	...	29	...	...	...	124
8290	R	Pegasi .	...	...	15	10	10	...	...	34	...	...	...	3	2	...	7	...	81
8600	R	Cassiopeiæ .	...	...	19	40	23	...	10	19	...	...	...	...	6	...	...	...	117
		Totals . .	20	93	1054	764	397	52	105	2137	45	28	75	370	237	26	23	260	5686

In addition to the above there are :—

3	observations of	Mira Ceti	by Ast.
11	,,	X Herculis	,, B.
7	,,	η Geminorum	,, Fd.
6	,,	R Leonis	,, Kp.
4	,,	R Scuti	,, Wd.

thus making a grand total of 5717 observations.

The bulk of the light-determinations has been made on the "step" system, the variable being estimated as so many steps brighter than a given star, or fainter than another star. With the exception of Backhouse, who gives the value of his step as 0·05 of a magnitude, the steps have been assumed to be 0·1 of a magnitude, and the mean of the several estimates made at one observation has been taken. A small number of the observations are on the "fractional" system, under which the variable is estimated as a certain fraction of the light-interval from one comparison star to another. To secure uniformity the record of such observations has been reduced to the "step" form, from the adopted magnitudes of the comparison stars.

The magnitudes of the comparison stars, generally, are taken from Vol. XXXVII. of the "Annals" of the Harvard College Observatory. Part I. of that Vol. gives certain circumpolar variables of which *R Aurigæ*, *R*, *T*, and *S Ursæ Majoris*, *R Draconis*, *T Cephei* and *R Cassiopeiæ* have been observed by the Section. The remaining stars (21 in number) are contained in Part II., with the exception of R Serpentis and R Aquilæ, for which special lists of comparison stars have been kindly furnished by Prof. E. C. Pickering.

As a rule, the charts in the Rev. F. Hagen's beautiful "Atlas Stellarum Variabilium" have been used; but as there are many comparison stars contained therein which do not occur in the H.C.O. lists, the magnitudes of such as are used have been deduced, in the photometric scale, from Table XVIII. in Part II. just referred to.

Thus the scale of magnitudes in the following lists is entirely that of the Harvard College Observatory. This was adopted at the suggestion both of Prof. E. C. Pickering, Director of that Observatory, and the Rev. F. Hagen, so that our work might be strictly comparable with that of H.C.O. Previously the results of work, *i.e.* dates of maxima and minima, peculiarities of light-curves, etc., etc., as given in Vol. XI. Part IV. of the "Memoirs," and the different Interim Reports of the Section in the "Journal," were deduced from the use of Hagen's "magnitudes," and H.C.O. magnitudes where not given by Hagen. Practically the change to the complete photometric scale makes no difference in the dates of maxima and minima. The amplitude only of the curve may be a little altered, especially near minimum.

Although H.C.O. gives the magnitude to the second decimal of the comparison stars, our deduced magnitudes, after being obtained from the two decimals, are given to the nearest first decimal figure only. Experience shows that the second decimal is far too fine a scale in any visual observations.

A complete and thoroughly reliable scale of magnitudes of all the

comparison stars required in connection with variables appears to be still a desideratum. In the case of the different editions of the photometric catalogues one notices that successive determinations alter not only the second, but often the first decimal figure. Moreover, when converting Hagen's "grades" to the photometric scale, the relative position in the light-scale of two stars is occasionally absolutely changed, the brighter star in the "Atlas Stellarum Variabilium" becoming the fainter in the photometric scale, and *vice versa*.

Referring now to the following lists of observations :—

The 1st column contains the Calendar date.

The 2nd column gives the corresponding Julian date, omitting the number 2410000.

The 3rd column notifies the particulars of the instruments used : T = Telescope, B = Binocular. A number, such as 28, indicates the magnifying power used with the telescope.

The 4th column gives the "class." The word is intended to imply the degree of confidence entertained by the observer for his observation, 1 being first-rate, good, reliable ; 2, not so good, inferior, owing to hindrances such as cloud, haze, moon, etc. ; and 3, doubtful, unreliable. It should be noted that this method of classifying the work was not adopted until October 1901. Prior to that date the class, not having been directly recorded, has been inferred from the observing conditions, and from any remarks made by the observer at the time.

The 5th column contains the abbreviation of the observer's name, as per preceding list.

The 6th column contains the light-estimates, the negative sign after the comparison star indicating that the variable is fainter and the positive sign brighter than the comparison star. This is the form of record adopted by Prof. Turner in his reduction of the Rousdon observations of variable stars, "Memoirs," R.A.S., Vol. LV. Where not otherwise stated, the small Arabic letters correspond with those indicating the comparison stars in Vol. XXXVII. of H.C.O. Annals. Figures, when used, correspond to those in the "Atlas Stellarum Variabilium," and apply to comparison stars not given by H.C.O. Any stars used other than those just mentioned are detailed in a note at the head of each list of observations, and are generally denoted by Roman capitals. Sometimes there are no light-comparisons made, in which case there is nothing in column 6, the observation being generally an intrinsic one, and not comparative.

Column 7 contains the resulting magnitude of the variable, being the mean when two or more separate light-estimates are made. When no light-comparison is made, the figure here inserted is merely an intrinsic estimate or guess at the magnitude, as made by the observer at the time. Such observations are generally printed in italics. Needless to say that determinations made in this way are vague, and of small value as compared with differential ones.

The 8th column contains the magnitude calculated for the particular date : this is arrived at from a typical curve. For the circumpolar stars such typical or mean curves are given in pp. 124–127 of the Vol. of H.C.O. Annals referred to ; for the remaining stars, the data from which the typical curve was

drawn are given in the Notes heading the list of observations of each star. As a rule, the Period, and $M—m$ (interval from minimum to next following maximum), also the Epoch, and formula for calculating dates of maximum, etc., are taken from Dr Chandler's "Revision of Elements of Third Catalogue of Variable Stars." (A. J., Nos. 553 and 560.)

The 9th column shows the difference between the observed magnitude and that taken from the typical curve, it being expressed algebraically.

The 10th column contains any remarks considered to be of interest, as bearing on the magnitude, colour, etc., etc., of the variable generally. They are usually taken from the original observer's record. An asterisk in this column indicates that the record was either difficult to interpret or was, for various reasons, considered doubtful by the compiler.

The thanks of the Director are largely due to Mr C. L. Brook, who has re-reduced from the earlier summaries the whole of the observations, and himself written the largest part of each list. The Director is also grateful to that gentleman for valuable advice and suggestions during the progress of the work, which has occupied nearly a year.

Experience shows that very reliable results as to light-curves of variables can be deduced from the work of several observers acting in concert. It is true that in the precise matter of "magnitude," observers will often produce different results, even when observing practically simultaneously. This may be due to the idiosyncrasy of the observer, to differing weather conditions, to the different localities where the observations are made, and to other causes. But even in the case of the largest divergence in light-estimates, if the curves from each observer's observations are separately plotted, it is seen they generally run fairly parallel to one another, so that the mean curve of the whole will in all probability be a very fair approximation to the truth.

It is not intended that this Memoir should form more than the actual record of the observations, and, therefore, no discussion of results is herein entered upon. But it is thought that a visual representation of the observations may be of use for reference. They have, therefore, been plotted on the accompanying plates, the originals of which were prepared on squared paper, on the scale

Ordinate : $\frac{1}{2}$ inch = 1 magnitude.
Abscissa : $\frac{1}{2}$ inch = 20 days.

A most probable curve has been drawn among the dots representing the observations, and the typical curve has been added, so that the diagrams show at a glance the divergence of observation from calculation. The figures at the base of each diagram indicate the last four digits representing the Julian day, omitting the constant number 2410000.

As in certain places the dots are crowded together owing to the considerable number of observations, it is possible that a few errors in plotting may have occurred, as, once marked in, it is very difficult to detect an error without doing all the work over again. The light-curve would not be materially affected by such occasional slips.

In the case of *X Herculis*, curves representing the results from comparison with different stars are given, with a view to elucidating the variation which at present seems obscure and difficult to bring out from the observations. For detecting possible variation in one of the comparison stars, a diagram is also given showing the apparent light-interval between the comparison stars, independent of the variable.

The cost of publishing this Memoir has been defrayed by a grant from the Government Grant Committee of the Royal Society; by a most generous contribution from Mr C. L. Brook, F.R.A.S., as well as another sum from Mr W. M. Worssell, and by a grant from the Association. The best thanks of the Association are accordingly tendered to the Royal Society and to the two gentlemen named, without whose help it would not have been possible to publish the Memoir. It is hoped that the latter may be of service to those who are engaged in researches on the light-variation of the stars in question.

TABLE OF LIGHT-CURVES.

		PLATE			PLATE
R	Andromedæ	1	R	Serpentis	7
R	Arietis	1	X	Herculis	7, 8 and 9
o	(Mira) Ceti	2	R	Draconis	9
R	Aurigæ	2	S	Herculis	10
U	Orionis	3	T	,,	10
R	Leonis	3	R	Scuti	11
R	Ursæ Majoris	4	R	Aquilæ	11
T	,,	4	R	Cygni	12
S	,,	5	X	,,	12
R	Hydræ	5	T	Cephei	13
S	Virginis	5	W	Cygni	13
R	Bootis	5	R	Pegasi	14
S	Coronæ	6	R	Cassiopeiæ	14
R	Coronæ	6			

(112) R ANDROMEDÆ.

NOTES.

Star j = D.M. + 38° 68, 7·05 m. P.D.M.
,, P = D.M. + 35° 8, 6·00 m. R.H.P.
Data for mean curve:—Period, 410 d. $M-m$, 119 d. Variation, 7·0 m. to 13·5 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Sept. 2	4900	B.	1	Ma.	1 – 5	5·7	7·7	– 2·0	Much > 3.
,, 3	4901	,,	,,	,,	1 – 2·5	5·5	7·6	2·1	
,, 4	4902	,,	,,	,,	1 – 6, 3+6	6·1	7·5	1·4	
,, 9	4907	,,	,,	,,	1 – 6	5·8	7·3	1·5	
,, 11	4909	,,	,,	,,	1 – 5	5·7	7·2	1·5	
,, 12	4910	,,	2	,,	1 – 5	5·7	7·2	1·5	
,, 14	4912	,,	,,	,,	1 – 5·5	5·8	7·2	1·4	
,, 30	4928	,,	1	,,	1 – 7·5, 3+7·5	6·1	7·0	·9	
Oct. 5	4933	,,	,,	,,	1 – 5, 3+7·5	5·9	7·1	1·2	
,, 12	4940	,,	2	,,	1 – 10, 3+5	6·3	7·2	·9	
,, 13	4941	,,	3	,,	3+4·5	6·5	7·2	·7	
,, 18	4946	,,	,,	,,	3+1	6·8	7·2	·4	
,, 20	4948	,,	2	,,	3+2	6·7	7·3	·6	
,, 23	4951	,,	,,	,,	3+2	6·7	7·3	– ·6	
,, 28	4956	,,	1	,,	3 – 5	7·4	7·4	0	
,, 30	4958	B. & T.28	,,	,,	3 – 5	7·4	7·4	0	
,, 31	4959	B.	2	,,	3 – 1	7·0	7·5	– ·5	
Nov. 6	4965	,,	1	,,	3 – 5	7·4	7·6	– ·2	
,, 10	4969	,,	3	,,	3 – 10	7·9	7·7	+ ·2	
,, 11	4970	,,	,,	,,	3 – 10	7·9	7·7	+ ·2	
1900.									
Aug. 26	5258	,,	1	Or.	...	...	11·7	...	Invisible < 9·0.
Sept. 19	5282	,,	,,	Ke.	...	...	9·0	...	Very faint, est. 8·3.
,, 21	5284	,,	,,	Pe.	3 – 6, 2+2, f+3	7·4	8·9	– 1·5	
,, 24	5287	,,	,,	Or.	3 – 2	7·1	8·7	1·6	
,, 29	5292	,,	,,	,,	=3	6·9	8·3	1·4	About.
Oct. 2	5295	T.30	2	Ch.	3 – 3	7·2	8·1	·9	
,, 2	5295	B.	,,	Ke.	...	...	8·1	...	Est. 7·0.
,, 2	5295	,,	2	Or.	3 – 2	7·1	8·1	1·0	
,, 12	5305	,,	,,	,,	=3	6·9	7·6	·7	
,, 13	5306	T.30	1	Ch.	3+2	6·7	7·5	·8	
,, 13	5306	B.	,,	Ke.	1 – 10, 3+7	6·2	7·5	1·3	
,, 14	5307	T.30	3	Ch.	3+2	6·7	7·5	·8	
,, 14	5307	B.	1	Wl.	c – 2, 3+4	6·6	7·5	·9	
,, 15	5308	,,	2	Or.	=3	6·9	7·4	·5	> 2.
,, 16	5309	,,	1	,,	3+2	6·7	7·4	·7	Much > 2.
,, 17	5310	,,	,,	Ke.	3+6	6·3	7·3	1·0	
,, 19	5312	,,	2	Ma.	3+0·5	6·9	7·3	·4	

(112) R ANDROMEDÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Oct. 21	5314	T.30	1	Ch.	2+2, 3+4	6·8	7·2	·4	
,, 21	5314	B.	2	Ma.	3+2	6·7	7·2	·5	
,, 22	5315	,,	1	Ke.	1−10, 3+5	6·3	7·2	·9	
,, 26	5319	,,	,,	Or.	=c	6·4	7·1	·7	>3, much>2.
,, 26	5319	,,	,,	Ma.	3+2·5	6·7	7·1	·4	
,, 26	5319	,,	,,	Ke.	=c, 3+5	6·4	7·1	·7	
,, 26	5319	,,	,,	Wl.	c−2, 3+5	6·5	7·1	·6	
,, 26	5319	T.30	,,	Ch.	3+3	6·6	7·1	·5	
,, 27	5320	,,	,,	,,	3+3	6·6	7·1	·5	
,, 27	5320	B.	1	Ma.	3+2·5	6·7	7·1	−·4	
Nov. 9	5333	T.30	1	Ch.	3−2	7·1	7·1	0	
,, 9	5333	B.	1	Ma.	3+1	6·8	7·1	−·3	
,, 9	5333	,,	,,	Ke.	c−1·5, 3+4·5	6·5	7·1	·6	White.
,, 10	5334	T.30	,,	Ch.	3+3	6·6	7·1	·5	
,, 13	5337	B.	2	Ma.	3+1	6·8	7·1	·3	
,, 13	5337	,,	1	Ke.	c−2·5, 3+2·5	6·7	7·1	·4	
,, 13	5337	T.30	,,	Ch.	3+2	6·7	7·1	·4	
,, 15	5339	B.	,,	Ma.	3+1	6·8	7·1	·3	
,, 15	5339	T.30	,,	Ch.	3+2	6·7	7·1	·4	
,, 17	5341	B.	,,	Ke.	c−4, 3+2	6·8	7·1	·3	
,, 17	5341	,,	,,	Ma.	3+0·5	6·9	7·1	−·2	
,, 18	5342	T.30	2	Ch.	3−4, =2	7·3	7·1	+·2	
,, 18	5342	B.	1	Or.	=3	6·9	7·1	−·2	
,, 18	5342	,,	,,	Ma.	3−1	7·0	7·1	·1	
,, 22	5346	,,	,,	Ke.	c−4, 3+2	6·8	7·2	−·4	
,, 23	5347	T.30	,,	Ch.	3−3	7·2	7·2	0	
,, 23	5347	B.	,,	Ma.	3−2·5	7·2	7·2	0	
,, 25	5349	T.30	,,	Ch.	3−3	7·2	7·2	0	
,, 25	5349	B.	,,	Ke.	c−4, 3+2	6·8	7·3	−·5	
,, 27	5351	T.30	2	Ch.	3−3	7·2	7·3	·1	
,, 27	5351	B.	1	Or.	3−2	7·1	7·3	−·2	
Dec. 7	5361	T.30	2	Ch.	6+4	8·3	7·4	+·9	
,, 7	5361	B.	1	Ma.	3−5	7·4	7·4	0	
,, 9	5363	,,	,,	Ke.	3−2	7·1	7·5	−·4	
,, 10	5364	T.30	,,	Ch.	=1	9·0	7·5	+1·5	
,, 13	5367	,,	,,	,,	=1	9·0	7·6	+1·4	
,, 13	5367	B.	,,	Ke.	3−3·5	7·3	7·6	−·3	
,, 13	5367	,,	2	Or.	=2	7·4	7·6	−·2	
,, 13	5367	T.28	1	Ma.	5+6	7·7	7·6	+·1	
,, 15	5369	T.30	,,	Ch.	=1	9·0	7·6	+1·4	
,, 15	5369	T.	2	Or.	f+1	7·6	0		Much<e, much>g.
,, 21	5375	B.	1	Ma.	...	...	7·8	...	Est. 8·0.
,, 22	5376	,,	,,	Ke.	3−7·5	7·7	7·8	−·1	
,, 26	5380	T.30	,,	Ch.	15+1	9·4	7·9	+1·5	
,, 28	5382	,,	,,	,,	=15	9·5	8·0	+1·5	
1901.									
Jan. 7	5392	B.	,,	Ra.	..	...	8·4	...	Invisible.
,, 9	5394	T.30	,,	Ch.	15−1, 17+1	9·6	8·4	+1·2	
,, 14	5399	,,	,,	,,	15−2	9·7	8·6	1·1	
,, 15	5400	,,	,,	,,	15−2, 17+1	9·7	8·6	1·1	
,, 15	5400	T.	,,	Or.	17−3	10·0	8·6	1·4	
,, 18	5403	T.30	,,	Ch.	17+1	9·6	8·7	·9	

(112) R ANDROMEDÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Feb. 11	5427	T.	1	Or.	17 – 2	9·9	9·5	·4	
,, 14	5430	T.28	,,	Ma.	17 – 1·5	9·8	9·6	+ ·2	
June 5	5541	T.30	2	Ch.	...	...	12·8	...	< 9·2.
,, 16	5552	,,	1	,,	...	...	13·0	...	<11·5.
July 15	5581	,,	,,	,,	...	...	13·3	...	<11·5.
,, 18	5584	,,	,,	,,	...	...	13·3	...	<11·5.
Aug. 20	5617	T.90	,,	,,	44 – 4, 48 – 2	13·2	13·5	– ·3	*
Sept. 9	5637	,,	,,	,,	40 + 2, 44 + 3, 48 + 6	12·1	13·2	– 1·1	
,, 15	5643	T.90	1	Ch.	35 – 4, 37 – 2, 40 + 2	11·7	12·6	– ·9	Red.
,, 18	5646	T.	,,	Pe.	=44	12·4	12·5	·1	
Oct. 4	5662	T.28	,,	Ma.	17 – 4·5, 25 + 4	10·1	11·2	1·1	
,, 5	5663	T.60	,,	Ch.	17 – 4, =25, 30 + 6	10·4	11·1	·7	
,, 5	5663	T.20	,,	LeB.	17 – 3, 19 – 3	10·0	11·1	1·1	
,, 7	5665	T.60	,,	Ch.	15 – 5, 17 – 4, 25 + 3	10·1	10·9	·8	Fine red.
,, 13	5671	T.20	,,	LeB.	15 – 1, 17 + 2	9·6	10·3	·7	
,, 18	5676	T.30	,,	Ch.	5 – 8, 7 – 3, 15 + 6, 17 + 6	9·1	9·9	·8	Fine red.
,, 18	5676	T.20	,,	LeB.	13 + 2	9·2	9·9	·7	
,, 30	5688	,,	3	,,	5 + 1	8·2	8·9	·7	
,, 31	5689	T.30	1	Ch.	4 – 2, 5 + 3	8·0	8·8	·8	Orange.
Nov. 10	5699	T.20	2	LeB.	3 – 2, 2 + 2	7·1	8·1	1·0	
,, 14	5703	,,	,,	,,	3 + 3	6·6	7·9	1·3	V. doubtful obs.
,, 16	5705	,,	,,	,,	3 – 3, 2 + 2	7·2	7·8	·6	
,, 16	5705	B	,,	Ma.	3 + 2·5	6·7	7·8	1·1	
,, 17	5706	T.20	,,	LeB.	3 – 2, 2 + 2	7·1	7·8	·7	
,, 21	5710	,,	,,	,,	3 + 3, 2 + 5	6·7	7·5	·8	
,, 22	5711	,,	,,	,,	3 + 4	6·5	7·5	1·0	
,, 23	5712	,,	,,	,,	3 + 4	6·5	7·4	·9	
,, 26	5715	T.30	,,	Ch.	1 – 10, 3 + 7	6·2	7·3	1·1	
,, 28	5717	T.30 V.F.	1	,,	1 – 14, 2 + 6	6·7	7·3	·6	
,, 29	5718	T.20	,,	LeB.	3 + 5	6·4	7·2	·8	
Dec. 3	5722	,,	,,	,,	3 + 5	6·4	7·1	·7	
,, 6	5725	,,	2	,,	3 + 2	6·7	7·0	·3	
,, 8	5727	,,	1	,,	3 + 2	6·7	7·0	·3	
,, 8	5727	T.60	,,	Ch.	3 + 4, 2 + 6	6·6	7·0	·4	
,, 10	5729	T.20	,,	LeB.	3 + 5	6·4	7·0	·6	
,, 16	5735	T.60 V.F.	2	Ch.	3 + 4, 2 + 6	6·6	7·0	·4	
,, 17	5736	T.20	3	LeB.	3 + 5	6·4	7·0	·6	
,, 18	5737	,,	2	,,	3 + 4	6·5	7·0	·5	
,, 26	5745	T.30	1	Ch.	3 + 4, 2 + 5	6·7	7·1	·4	
,, 27	5746	T.20	,,	LeB.	3 + 2	6·7	7·2	·5	Date uncertain.
,, 29	5748	B.	1	Ma.	3 + 0·5, j + 1	6·9	7·2	·3	
,, 30	5749	T.20	3	LeB.	=3	6·9	7·2	·3	
1902.									
Jan. 4	5754	T.28	1	Ma.	3 + 2	6·7	7·2	·5	
,, 4	5754	T.30	,,	Ch.	3 + 3, 2 + 5	6·7	7·2	·5	

(112) R ANDROMEDÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Jan. 4	5754	T.20	1	LeB.	3+2	6·7	7·2	·5	
,, 5	5755	T.30	,,	Ch.	3+1, 2+3	6·9	7·3	·4	
,, 5	5755	B.	,,	Ma.	3+1	6·8	7·3	·5	
,, 5	5755	T.20	,,	LeB.	3+2	6·7	7·3	·6	
,, 7	5757	...	...	Co.	...	*6·8*	7·3	·5	
,, 9	5759	T.20	3	LeB.	3+2	6·7	7·3	− ·6	
,, 10	5760	T.30	1	Ch.	3−3, 2−2	7·4	7·3	+ ·1	
,, 14	5764	T.20	2	LeB.	3+2	6·7	7·4	− ·7	
,, 19	5769	,,	,,	,,	3+1	6·8	7·5	·7	
,, 28	5778	...	...	Co.	...	*7·3*	7·7	·4	
,, 31	5781	T.95	2	Ch.	=3	6·9	7·8	− ·9	
Feb. 9	5790	T.30	1	,,	4−4, =5, =6, 7+2	8·5	8·1	+ ·4	
,, 28	5809	,,	,,	,,	3−8, 5−3, =6, 7+1, 15+10	8·4	8·8	− ·4	
June 21	5922	...	...	Co.	...	*12·0*	12·5	− ·5	
,, 29	5930	T.95	1	Ch.	=40	11·6	12·7	1·1	About.
July 6	5937	,,	,,	,,	...	...	12·8	...	<11·6.
Aug. 24	5986	...	...	Co.	...	*12·0*	13·4	1·4	
Sept. 4	5997	...	...	,,	...	*12·5*	13·4	·9	
,, 24	6017	...	...	,,	...	*11·5*	13·5	2·0	
,, 30	6023	...	...	,,	...	*11·5*	13·4	1·9	
Oct. 8	6031	T.95	2	Ch.	=40	11·6	13·3	1·7	
,, 21	6044	,,	1	,,	=40	11·6	12·8	1·2	
,, 24	6047	...	...	Co.	...	*12·0*	12·6	·6	
,, 29	6052	T.95	1	Ch.	40+3	11·3	12·4	1·1	
,, 30	6053	B.	,,	Ma.	...	...	12·3	...	Invisible.
Nov. 1	6055	T.95	,,	Ch.	35−1, =37, 40+4	11·4	12·2	·8	
,, 7	6061	...	...	Co.	...	*11·5*	11·7	·2	
,, 15	6069	...	...	,,	...	*10·5*	10·9	− ·4	
,, 28	6082	...	...	,,	...	*9·8*	9·7	+ ·1	
,, 28	6082	T.60	3	Ch.	=17	9·7	9·7	0	
Dec. 2	6086	,,	1	,,	5−5, 6−4	8·9	9·3	− ·4	
,, 4	6088	...	...	Co.	...	*9·0*	9·2	·2	
,, 15	6099	...	...	,,	...	*7·5*	8·4	·9	
,, 20	6104	...	...	,,	...	*7·0*	8·1	1·1	
,, 23	6107	B. & T.28	1	Ma.	=3	6·9	7·9	1·0	
,, 24	6108	B.	2	,,	3+1	6·8	7·8	1·0	
,, 28	6112	...	...	Co.	...	*6·5*	7·6	1·1	
,, 31	6115	...	...	,,	...	*6·5*	7·5	1·0	
1903.									
Jan. 2	6117	B.	1	,,	3+4·5	6·5	7·4	·9	
,, 3	6118	,,	,,	Ma.	3+3	6·6	7·4	·8	
,, 11	6126	,,	2	Co.	3+2·5	6·7	7·1	·4	
,, 23	6138	,,	1	,,	3+1·5	6·8	7·0	·2	
,, 23	6138	,,	,,	Ma.	=3	6·9	7·0	·1	
,, 29	6144	T.28	2	,,	3+1	6·8	7·1	·3	

(112) R ANDROMEDÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Feb. 1	6147	B.	1	Co.	3+1	6·8	7·1	·3	
,, 13	6159	,,	,,	,,	3−2	7·1	7·2	− ·1	
,, 17	6163	B. & T.28	,,	Ma.	3−7·5	7·7	7·3	+ ·4	
,, 21	6167	B.	,,	Co.	3−1	7·0	7·4	− ·4	
,, 28	6174	,,	,,	,,	3−2	7·1	7·5	− ·4	
,, 28	6174	T.28	,,	Ma.	3−6, j+1·5	7·2	7·5	·3	
Mar. 16	6190	B.	...	Co.	...	*7·5*	8·0	·5	<3.
,, 22	6196	,,	...	,,	...	...	8·2	...	Invisible.
July 23	6319	T.	...	,,	...	...	12·2	...	,, in 6½ inch.
Aug. 26	6353	T.28	2	Ma.	...	...	12·9	...	Invisible<9·0.
Nov. 14	6433	T.	...	Co.	...	*11·5*	13·3	1·8	
,, 15	6434	B.	1	Ma.	...	...	13·3	...	Invisible.
Dec. 11	6460	T.	...	Co.	...	*10·5*	12·2	1·7	
,, 24	6473	,,	...	,,	17+2	9·5	10·9	1·4	
1904.									
Jan. 3	6483	,,	...	,,	17+8	8·9	10·0	1·1	
,, 10	6490	,,	...	,,	3−4	7·3	9·4	2·1	
,, 13	6493	,,	...	,,	3−2	7·1	9·2	2·1	Nearly=3.
,, 16	6496	B.	1	Ma.	=3	6·9	8·9	−2·0	Ruddy.
,, 19	6499	B.	1	Ma.	3+1	6·8	8·7	−1·9	
,, 22	6502	,,	,,	,,	3+3·5	6·6	8·5	1·9	
,, 22	6502	T.	...	Co.	3+1	6·8	8·5	1·7	
Feb. 2	6513	B.	2	Or.	1−9, 3+9	6·1	7·8	1·7	*
,, 6	6517	,,	...	Co.	3+9	6·0	7·6	1·6	*
,, 6	6517	,,	1	Ma.	P−2·5, 3+7·5	6·2	7·6	1·4	
,, 13	6524	,,	,,	,,	c+4, 3+7	6·1	7·3	1·2	
,, 13	6524	,,	2	Or.	1−12, 3+6	6·4	7·3	·9	*
,, 13	6524	,,	...	Co.	3+9	6·0	7·3	1·3	*
,, 14	6525	,,	3	Ma.	3+7	6·2	7·3	1·1	
,, 15	6526	,,	2	,,	c+3, 3+6	6·2	7·3	1·1	
,, 15	6526	,,	,,	Or.	c+2, 3+7	6·2	7·3	1·1	*
,, 18	6529	,,	1	Ma.	c−2, 3+4	6·6	7·2	0·6	
Mar. 10	6550	B.	...	Co.	3+1	6·8	7·1	·3	
,, 21	6561	,,	2	,,	=3	6·9	7·2	·3	
July 5	6667	T.	...	,,	17−5	10·2	10·5	·3	
,, 12	6674	,,	...	,,	17−7	10·4	10·8	− ·4	
Aug. 2	6695	,,	...	,,	=37	11·5	11·4	+ ·1	
,, 12	6705	T.28	1	Ma.	...	...	11·7	...	Invisible<9·0.
,, 14	6707	T.	...	Co.	40−3	11·9	11·7	·2	
Sept. 3	6727	,,	...	,,	...	...	12·2	...	Glimpsed±13·0.
,, 18	6742	T.150	1	Br.	...	...	12·6	...	,, <13·0.
Oct. 3	6757	T.	...	Co.	...	...	12·9	...	Just visible±13·0.
,, 8	6762	T.300	1	Br.	=α	13·9	13·0	·9	

(112) R ANDROMEDÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Oct. 12	6766	B.	1	Ma.	...	...	13·0	...	Invisible.
,, 29	6783	T.	2	Co.	...	...	13·2	...	,,
Nov. 7	6792	T.300	1	Br.	=α	13·9	13·3	·6	
,, 14	6799	T.28	,,	Ma.	...	...	13·3	...	Invisible < 9·3.
,, 26	6811	T.150	,,	Br.	α+3	13·6	13·4	+ ·2	
Dec. 5	6820	T.	...	Co.	...	...	13·5	...	Invisible < 12·0.
,, 5	6820	B.	1	Ma.	...	...	13·5	...	,,
,, 10	6825	,,	,,	,,	...	...	13·5	...	,,

(782) R Ceti ARIETIS.

NOTES.

Star P = D.M. + 24° 325, 7·08 m. P.D.M.

,, N unidentified. Estimated 8·75 m. It follows star k of H.C.O. 20 s. ± in R.A. and is about the same Dec.

Data for mean curve:—Period, 187 d. $M-m$, 92 d. Variation, 8·3 m. to 12·4 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Sept. 9	4907	T.28	1	Ma.	9−4, p−6	11·3	11·8	− ·5	*
Oct. 30	4958	,,	,,	,,	7−3·5	10·0	8·7	+1·3	
,, 31	4959	,,	2	,,	=4	8·7	8·7	0	
Nov. 6	4965	,,	,,	,,	N−5, 8+5	9·3	8·5	+ ·8	N = 8·75.
,, 10	4969	B.	3	,,	...	...	8·4	...	Invisible in Bin.
,, 11	4970	T.28	,,	,,	P−2·5	7·3	8·3	−1·0	
1900.									
Sept. 6	5269	T.	...	Ch.	...	...	12·1	...	Inv. in 2 inch < 10·5.
Oct. 2	5295	T.28	1	Wl.	9−6, 14+5	10·7	10·8	− ·1	*
,, 13	5306	T.	,,	Ch.	...	...	10·0	...	Inv. in 2 inch < 10·5.
,, 14	5307	,,	,,	Or.	5−3, =9, 11+3	10·1	9·9	+ ·2	
,, 19	5312	T.28	2	Ma.	4−5, 10−4	9·9	9·6	·3	*
,, 21	5314	T.	1	Ch.	...	*10·2*	9·5	·7	Just visible.
,, 26	5319	B.	,,	Ma.	...	...	9·1	...	Inv. in Bin. < 8·5.
,, 27	5320	T.28	2	,,	4−5, 7+4	9·2	9·1	+ ·1	
,, 27	5320	T.	1	Or.	4−3·5, 5+3·5	9·1	9·1	0	

(782) R ARIETIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Nov. 9	5333	T.30	1	Ch.	=8	9·8	8·6	+1·2	
,, 11	5335	,,	,,	,,	=8	9·8	8·5	1·3	
,, 13	5337	,,	,,	,,	=8	9·8	8·5	+1·3	
,, 13	5337	T.28	3	Ma.	4+2·5	8·5	8·5	0	
,, 15	5339	T.30	1	Ch.	=g	9·2	8·4	+ ·8	
,, 15	5339	T.28	1	Wl.	e−2, 4+3	8·4	8·4	0	
,, 18	5342	T.30	2	Ch.	=g	9·2	8·3	+ ·9	
,, 18	5342	B.	1	Ma.	...	*8·0*	8·3	− ·3	
,, 18	5342	T.	,,	Or.	4+3	8·4	8·3	+ ·1	
,, 23	5347	T.30	,,	Ch.	=g	9·2	8·3	+ ·9	
,, 23	5347	T.	2	Or.	4+5	8·2	8·3	− ·1	Crimson.
,, 25	5349	,,	1	,,	4+6, e+1	8·1	8·3	− ·2	Red.*
,, 25	5349	T.30	,,	Ch.	8+2	9·6	8·3	+1·3	
,, 27	5351	,,	,,	,,	4+2	8·5	8·4	+ ·1	
Dec. 7	5361	B.	3	Ma.	...	*7·0*	8·6	−1·6	
,, 10	5364	T.30	1	Ch.	4+3	8·4	8·7	·3	
,, 13	5367	,,	,,	,,	4+4	8·3	8·8	·5	
,, 13	5367	T.28	,,	Ma.	...	*7·0*	8·8	1·8	
,, 15	5369	T.30	,,	Ch.	4+4	8·3	8·9	·6	
,, 15	5369	T.	2	Or.	4+3	8·4	8·9	·5	Red.
,, 15	5369	T.28	1	Ma.	...	*7·5*	8·9	1·4	
,, 17	5371	T.30	,,	Ch.	4+3	8·4	9·0	·6	
,, 21	5375	B.	,,	Ma.	...	...	9·2	...	Inv. in Bin. <8·5.
,, 25	5379	T.30	,,	Ch.	=4	8·7	9·5	·8	
,, 26	5380	,,	2	,,	4−1	8·8	9·6	·8	
,, 28	5382	,,	1	,,	4+1	8·6	9·7	1·1	
1901.									
Jan. 7	5392	T.28	,,	Ma.	6+2·5, 9+4·5	9·5	10·4	·9	
,, 8	5393	,,	2	,,	6+2, 5−6	9·7	10·5	·8	
,, 9	5394	T.30	1	Ch.	9+1	10·0	10·6	·6	
,, 14	5399	T.28	,,	Ma.	7+1, 9+2	9·7	10·9	−1·2	
Feb. 5	5421	B.	2	,,	...	...	12·1	...	Invisible <8·5.
,, 12	5428	T.28	,,	,,	...	...	12·2	...	Invisible <8·5.
,, 14	5430	,,	1	,,	...	...	12·3	...	Invisible <8·5.
July 27	5593	T.60	2	Ch.	11−1, =12	10·7	11·4	− ·7	
Aug. 7	5604	,,	1	,,	6−4, 9−2	10·1	11·9	−1·8	
Oct. 4	5662	T.28	,,	Ma.	=14	11·2	11·1	+ ·1	
,, 7	5665	T.60	,,	Ch.	9−3, =11, 10−1	10·5	10·9	− ·4	
,, 16	5674	T.28	2	Ma.	9−1	10·2	10·3	− ·1	
,, 18	5676	T.30	1	LeB.	14−2	11·4	10·1	+1·3	
,, 30	5688	T.20	2	,,	4−3	9·0	9·3	− ·3	
Nov. 1	5690	,,	,,	,,	3−1, 4+2	8·5	9·2	− ·7	
,, 14	5703	,,	,,	,,	4+1	8·6	8·6	0	
,, 16	5705	,,	,,	,,	4+1	8·6	8·6	0	
,, 16	5705	T.28	,,	Ma.	4+2·5	8·5	8·6	− ·1	
,, 17	5706	T.20	,,	LeB.	4+2	8·5	8·6	− ·1	
,, 28	5717	T.30	1	Ch.	4+4	8·3	8·3	0	
,, 29	5718	T.20	,,	LeB.	4+4	8·3	8·3	0	

(782) R ARIETIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Dec. 16	5735	T.95	2	Ch.	6+5, 9+8	9·2	8·7	+ ·5	
,, 26	5745	,,	,,	,,	4−2, 9+5	9·2	9·2	0	
1902.									
Jan. 4	5754	T.20	1	LeB.	5−5, 9+3	9·8	9·8	0	
,, 5	5755	T.95	,,	Ch.	4−3, 6+2, 9+4	9·4	9·8	− ·4	
,, 5	5755	T.20	2	LeB.	5−5, 9+1	9·9	9·8	+ ·1	
,, 10	5760	,,	11	,,	=9	10·1	10·2	− ·1	
,, 28	5778	T.40	1	Br.	9−7·5, 14+3·5	10·8	11·4	·6	
,, 29	5779	,,	,,	,,	9−7·5, 14+3·5	10·8	11·4	·6	
,, 31	5781	,,	2	,,	=14	11·2	11·5	·3	
,, 31	5781	T.95	1	Ch.	9−5, =14, 19+5	11·3	11·5	− ·2	
Feb. 9	5790	,,	,,	,,	17−2, =18, 20+2	12·6	11·9	+ ·7	
,, 9	5790	T.75	,,	Br.	15−2·5, 18+8	11·5	11·9	− ·4	
,, 10	5791	,,	2	,,	=18	12·3	12·0	+ ·3	
,, 11	5792	,,	1	,,	=18	12·3	12·0	·3	
,, 28	5809	T.90 & 160	,,	Ch.	18−8, 19−6, 20−5, =26	13·5	12·4	1·1	V. faint, difficult.
,, 28	5809	T.75	,,	Br.	=19	12·8	12·4	·4	
Oct. 10	6033	T.95	,,	Ch.	14−2	11·4	11·2	+ ·2	
,, 21	6044	,,	,,	,,	9−2, 11+1	10·5	10·5	0	
,, 27	6050	,,	,,	,,	9+1	10·0	10·1	− ·1	
,, 30	6053	T.28	,,	Ma.	=9	10·1	9·8	+ ·3	
Nov. 1	6055	T.95	,,	Ch.	=9	10·1	9·7	·4	
,, 17	6071	T.25	,,	Br.	4−3, 5+4	9·0	8·8	·2	
,, 18	6072	,,	,,	,,	4−3·5, 5+3·5	9·1	8·8	·3	
,, 21	6075	T.40	2	,,	4−1·5, 5+5·5	8·9	8·7	·2	
,, 22	6076	T.28	1	Ma.	=11	10·8	8·7	2·1	Distinctly > 14.*
,, 23	6077	T.40	,,	Br.	=4	8·7	8·6	·1	
,, 28	6082	,,	,,	,,	=4	8·7	8·5	+ ·2	
Dec. 2	6086	,,	3	,,	=3	8·3	8·4	− ·1	Perhaps.
,, 18	6102	T.28	,,	Ma.	4+3·5	8·4	8·5	− ·1	Difficult.
,, 21	6105	,,	1	,,	4+3, 5+7	8·6	8·6	0	
,, 23	6107	,,	,,	,,	4+5·5	8·2	8·6	− ·4	
1903.									
Jan. 3	6118	,,	,,	,,	4+3	8·4	9·2	·8	
,, 23	6138	B	,,	,,	...	...	10·5	...	Invisible < 8.
,, 28	6143	T.28	,,	,,	9−1	10·2	10·9	− ·7	
Feb. 17	6163	T.28	1	Ma.	...	...	11·9	...	Invisible < 10·1.
,, 28	6174	,,	,,	,,	...	...	11·9	...	,, < 10 Mag.
Mar. 16	6190	,,	,,	,,	...	...	12·4	...	,, <8 Mag.
Oct. 17	6405	T.75	,,	Br.	=14	11·2	11·2	0	
,, 25	6413	,,	,,	,,	11−1, 12+1	10·7	10·7	0	
,, 30	6418	T.28	2	Ma.	...	...	10·4	...	Invisible < 9 Mag.
Nov. 6	6425	,,	,,	,,	=9	10·1	9·9	+ ·2	
,, 7	6426	,,	3	,,	=9	10·1	9·8	·3	
,, 8	6427	,,	2	,,	=9	10·1	9·7	·4	

(782) R ARIETIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Nov. 12	6431	T.40	2	Br.	9−2·5, 11+4·5	10·3	9·5	·8	
,, 14	6433	,,	1	,,	8−1·5, 9+1·5	9·9	9·4	·5	
,, 15	6434	,,	,,	,,	=8	9·8	9·3	·5	
,, 15	6434	T.28	,,	Ma.	7+1·5	9·5	9·3	·2	Much<9.
,, 17	6436	T.	2	Or.	=9	10·1	9·1	1·0	<7.
,, 18	6437	T.46	1	Br.	=8	9·8	9·1	·7	
,, 19	6438	T.28	,,	Ma.	=7	9·6	9·0	·6	
,, 21	6440	,,	,,	,,	7+2	9·4	8·9	·5	Much>9.
,, 21	6440	T.40	,,	Br.	5−1, 6+1	9·5	8·9	·6	
,, 25	6444	,,	2	,,	4−4·5, 5+2·5	9·2	8·8	·4	
Dec. 6	6455	T.25	1	,,	3−2, 4+2	8·5	8·4	+ ·1	Very difficult.
,, 14	6463	,,	,,	,,	=3	8·3	8·3	0	About.
1904.									
Jan. 13	6493	T.28	,,	Ma.	4+2	8·5	9·3	− ·8	
,, 15	6495	T.	2	Or.	=9	10·1	9·4	+ ·7	
,, 16	6496	T.28	1	Ma.	4+1	8·6	9·5	− ·9	
,, 19	6499	,,	,,	,,	4−10, 7+5	9·4	9·8	·4	
,, 22	6502	,,	,,	,,	=4	8·7	10·0	1·3	
Feb. 6	6517	,,	,,	,,	=7, 9−2	9·9	11·0	1·1	
,, 13	6524	,,	,,	,,	9−3·5, 11+3·5, =12	10·5	11·4	·9	
,, 15	6526	,,	2	,,	9−5	10·6	11·5	− ·9	
,, 18	6529	,,	,,	,,	...	...	11·7	...	<9·6.
Mar. 10	6550	,,	1	,,	...	...	11·3	...	Invisible<9·9
Sept. 15	6739	,,	2	,,	...	...	12·4	...	<10·0 invisible.
,, 17	6741	T.300	1	Br.	=20	13·3	12·4	+ ·9	
,, 18	6742	T.240	,,	,,	=20	13·3	12·4	·9	
Oct. 2	6756	T.150	,,	,,	=22	13·2	12·1	1·1	
,, 8	6762	,,	,,	,,	22−2, 26+3·5	13·3	12·0	1·3	
,, 11	6765	T.28	,,	Ma.	...	...	11·9	...	<9·6 invisible.
,, 12	6766	,,	,,	,,	...	...	11·8	...	<10·0 ,,
,, 13	6767	,,	,,	,,	...	...	11·8	...	<10·0 ,,
Nov. 7	6792	T.75	,,	Br.	9−3, 14+8	10·4	10·2	·2	
,, 12	6797	T.40	,,	,,	=9	10·1	9·9	·2	
,, 14	6799	T.28	,,	Ma.	9−1·5	10·2	9·7	·5	>14.
,, 23	6808	T.25	,,	Br.	4−5, 5+2	9·2	9·1	·1	
,, 26	6811	,,	,,	,,	4−3·5, 5+3·5	9·1	9·0	+ ·1	
Dec. 2	6817	,,	,,	,,	=4	8·7	8·7	0	
,, 5	6820	B.	,,	Ma.	...	...	8·7	...	<9·0 inv. in Bin.
,, 6	6821	T.25	,,	Br.	3−2, 4+2	8·5	8·6	− ·1	
,, 9	6824	,,	,,	,,	3+1	8·2	8·5	− ·3	
,, 10	6825	T.28	,,	Ma.	6−2·5	9·9	8·5	+1·4	
,, 13	6828	T.25	,,	Br.	2−11, 3+3	8·0	8·4	− ·4	
,, 22	6837	,,	,,	,,	2−9, P−6, 3+5	7·8	8·3	− ·5	*
,, 30	6845	,,	,,	,,	2−11, 3+3	8·0	8·4	− ·4	

(806) *o* (MIRA) CETI.

NOTES.

	R.H.P.
Star M = U.A. 244 Ceti	6·92 m.
,, N = ,, 224 ,, = F. 66 Ceti = B.D. - 3° 336	5·63 ,,
,, P = ,, 204 ,, = F. 61 Ceti	5·87 ,,
,, R = ξ Piscium	4·78 ,,

Data for mean curve:—Period, 332 d. $M - m$, 125 d. Variation, 3·4 m. to 8·75 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Jan. 1	4656	B.	2	Or.	N+2	5·4	5·4	0	
,, 4	4659	,,	,,	,,	s−1, N+1	5·5	5·5	0	
,, 9	4664	,,	,,	,,	N−3, y+3	6·0	5·8	+ ·2	
,, 14	4669	,,	,,	Ma.	N−5, y+4, z+3	6·2	6·0	·2	
,, 26	4681	,,	,,	,,	=a	7·3	6·5	·8	Distinctly < y.
,, 27	4682	,,	3	,,	y−4, a+4, =Mz−4	6·9	6·5	·4	
,, 28	4683	,,	1	,,	y−4, a+4, M−.1	6·9	6·6	·3	
Feb. 2	4688	,,	2	,,	a+1, M−3, z−6	7·2	6·8	+ ·4	
,, 13	4699	,,	,,	,,	...	...	7·3	...	< a.
,, 26	4712	,,	,,	,,	...	...	7·7	...	Invisible in Bin.
Aug. 12	4879	,,	1	Or.	m−6, s+6	4·8	4·9	− ·1	Orange red.
,, 28	4895	,,	,,	,,	k−4, m+2	3·9	4·0	− ·1	Orange.
,, 31	4898	,,	2	,,	=m	4·1	3·7	+ ·4	,,
Sept. 2	4900	,,	,,	,,	=m	4·1	3·7	·4	,,
,, 3	4901	,,	,,	,,	m+1	4·0	3·6	·4	Orange red.
,, 9	4907	,,	1	,,	m+1	4·0	3·5	·5	Much < k.
,, 12	4910	B. & N.E.	3	,,	=m	4·1	3·4	·7	
,, 16	4914	B.	,,	,,	m+2	3·9	3·4	·5	Pale orange.
,, 17	4915	,,	,,	,,	=m	4·1	3·4	·7	,,
,, 22	4920	B. & N.E.	,,	,,	m+2	3·9	3·5	·4	,,
,, 27	4925	B.	2	,,	m+2	3·9	3·6	·3	Orange.
,, 28	4926	,,	1	,,	=m	4·1	3·6	·5	Pale orange.
,, 30	4928	,,	3	Ma.	m−2	4·3	3·6	·7	A little < l.
Oct. 1	4929	,,	2	Or.	=m	4·1	3·7	·4	
,, 2	4930	N.E.	1	,,	=m	4·1	3·7	·4	
,, 4	4932	B.	2	,,	m−1	4·2	3·7	·5	Orange red.
,, 8	4936	,,	3	,,	=m	4·1	3·8	·3	Orange.
,, 10	4938	,,	2	,,	m−2	4·3	3·9	·4	,,
,, 12	4940	,,	,,	,,	m−3	4·4	3·9	·5	,,
,, 13	4941	,,	,,	,,	m−3	4·4	3·9	·5	,,
,, 31	4959	,,	,,	Ma.	t+2	5·3	4·4	·9	< l or m.
,, 31	4959	,,	3	Or.	m−6, s+6	4·8	4·4	·4	Yellowish red.
Nov. 6	4965	,,	2	Ma.	s+1, t−2	5·5	4·6	·9	
,, 6	4965	,,	1	Or.	s+2	5·2	4·6	·6	Yellowish red.

(806) o (MIRA) CETI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Nov. 11	4970	B.	3	Ma.	t+1	5·4	4·8	·6	
,, 23	4982	,,	,,	Or.	s−5, y+5	5·9	5·2	+ ·7	
Dec. 30	5019	,,	2	,,	...	...	6·8	...	>y.
,, 31	5020	,,	,,	,,	...	...	6·8	...	Barely visible in Bin.
1900.									
Jan. 18	5038	,,	1	Ma.	...	...	7·5	...	Just visible in Bin.
,, 24	5044	,,	2	Or.	...	...	7·7	...	Invisible ,,
,, 25	5045	,,	1	Ma.	...	...	7·7	...	,, ,,
July 24	5225	,,	2	Or.	g−7, k+1, m+7	3·4	4·0	− ·6	
,, 28	5229	,,	,,	,,	g−7, k+1, m+7	3·4	3·8	·4	Fiery orange.
,, 30	5231	N.E. & B.	1	,,	g−7, k−2, l+2, m+7	3·6	3·7	− ·1	
Aug. 2	5234	B.	,,	,,	=k, l+2	3·6	3·6	0	
,, 5	5237	,,	,,	,,	k−1, l+1	3·7	3·5	+ ·2	Fiery orange.
,, 7	5239	N.E.	,,	,,	k−1, l+1, g−8, m+4	3·7	3·5	·2	
,, 13	5245	,,	2	,,	=k, l+2, g−8, m+4	3·7	3·4	+ ·3	
,, 22	5254	N.E. & B.	1	Or.	k−3, m+3	3·8	3·5	+ ·3	Orange.
,, 24	5256	B.	,,	,,	k−3, m+3, l−2	3·9	3·5	·4	
Sept. 2	5265	,,	,,	,,	l−1·5, m+1·5	4·0	3·8	·2	
,, 18	5281	,,	,,	Ma.	m−10	5·1	4·2	·9	
,, 19	5282	,,	2	Or.	m−8, ε+5	4·9	4·2	·7	
,, 21	5284	,,	1	,,	m−8, s+5	4·9	4·2	·7	
,, 25	5288	,,	,,	,,	m−8, s+5	4·9	4·3	·6	
,, 29	5292	,,	,,	Ma.	t+1	5·4	4·4	1·0	Record doubtful.
,, 29	5292	,,	,,	Or.	m−6, s+6	4·8	4·4	·4	
Oct. 16	5309	,,	,,	,,	s−5, t−5, u−5, x+2	6·0	5·0	1·0	
,, 18	5311	,,	,,	Ma.	y−1·5, z−1·5	6·5	5·1	1·4	
,, 21	5314	,,	2	,,	=y, z+1	6·5	5·2	1·3	
,, 27	5320	,,	1	,,	M+2, z+1	6·6	5·4	1·2	
Nov. 15	5339	,,	2	Or.	z−3, α+3	7·0	6·2	·8	
,, 17	5341	,,	1	Ma.	=α	7·3	6·3	1·0	
,, 18	5342	,,	,,	,,	α−1	7·4	6·4	1·0	
,, 27	5351	T.	2	Or.	β+3, α−3	7·7	6·8	·9	Much >ε.
Dec. 13	5367	B.	,,	,,	β−3	8·3	7·4	·9	Only just visible.
,, 15	5369	T.	2	Or.	=β, α−8, δ+8	8·0	7·5	·5	
,, 15	5369	T.28	1	Ma.	β+2	7·8	7·5	·3	Much >δ or ε.
,, 21	5375	,,	2	,,	...	...	7·1	...	Just visible in Bin.
1901.									
Jany. 7	5392	,,	1	,,	δ+6, ε+6	8·4	8·1	·3	
,, 14	5399	,,	,,	,,	δ+2, ε+4	8·7	8·3	·4	*
,, 14	5399	T.	,,	Or.	δ−1, ε+2	9·0	8·3	·7	
Oct. 3	5661	T.30	2	Ch.	y−3, z+3	6·5	5·8	·7	Fine red.
,, 5	5663	B.	1	Wl.	z−2, α+2	7·0	5·9	1·1	
,, 12	5670	,,	,,	,,	z−3, α+3	7·0	6·2	·8	

(806) *o* (MIRA) CETI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Oct. 13	5671	B.	1	Wl.	$z-4$, $\alpha+2$	7·1	6·2	·9	
,, 14	5672	,,	,,	,,	$z-4$, $\alpha+2$	7·1	6·3	·8	
,, 16	5674	,,	,,	,,	$\alpha-3$, $\beta+4$	7·6	6·4	1·2	
,, 17	5675	,,	,,	,,	$\alpha-2$, $\beta+5$	7·5	6·4	1·1	
,, 18	5676	,,	2	Ma.	$\beta+5$	7·5	6·5	1·0	
,, 18	5676	,,	,,	Wl.	$\alpha-3$, $\beta+4$	7·6	6·5	1·1	
,, 19	5677	,,	,,	,,	$\alpha-2$, $\beta+5$	7·5	6·5	1·0	
,, 19	5677	,,	1	Ma.	$\beta+4$	7·6	6·5	1·1	
,, 20	5678	,,	2	Wl.	$\alpha-3$, $\beta+3$	7·7	6·5	1·2	
,, 22	5680	,,	,,	Ma.	...	...	6·6	...	Barely visible in Bin.
,, 29	5687	,,	1	Wl.	$\alpha-3$, $\beta+2$	7·7	7·0	·7	
,, 31	5689	,,	,,	,,	$\alpha-4$, $\beta+3$	7·7	7·0	·7	
Nov. 1	5690	,,	,,	,,	$\alpha-5$, $\beta+3$	7·8	7·0	·8	
,, 3	5692	,,	,,	,,	$\alpha-5$, $\beta+3$	7·8	7·1	·7	
,, 3	5692	T.28	,,	Ma.	$=\beta$, $\delta+10$	7·9	7·1	·8	
,, 4	5693	B.	,,	Wl.	$\alpha-6$, $\beta+2$	7·9	7·2	·7	
,, 6	5695	,,	,,	,,	$\alpha-6$, $\beta+2$	7·9	7·3	+ ·6	
,, 11	5700	B.	1	Wl.	$\alpha-7$, $\beta+1$	8·0	7·4	+ ·6	
,, 13	5702	,,	2	,,	$\beta-2$	8·2	7·5	·7	
,, 14	5703	T.28	,,	Ma.	$\beta-1·5$	8·2	7·5	·7	$>\delta$ ruddy.
,, 15	5704	B.	,,	Wl.	$\beta-2$	8·2	7·6	·6	
,, 16	5705	,,	,,	,,	$\beta-2$	8·2	7·6	·6	
,, 27	5716	,,	1	,,	$\beta-4$	8·4	7·9	·5	
,, 28	5717	,,	,,	,,	β 4	8·4	7·9	·5	
Dec. 11	5730	,,	,,	,,	$\beta-5$	8·5	8·2	·3	$>\delta$.
,, 16	5735	,,	,,	,,	$\gamma-1$	8·7	8·3	·4	
,, 29	5748	T.28	2	Ma.	$\epsilon-2$	9·4	8·5	·9	
1902.									
Jan. 4	5754	,,	1	,,	$\epsilon-1$	9·3	8·6	·7	
Feb. 7	5788	...	...	Co.	...	*8·0*	8·7	·3	*About.*
Sept. 4	5997	...	...	,,	...	*7·0*	6·0	1·0	
,, 7	6000	...	...	,,	...	*7·0*	6·1	·9	
,, 24	6017	B.	2	Ma.	$\alpha-5$	7·8	6·9	·9	
,, 28	6021	...	...	Co.	...	*7·5*	7·0	·5	
Oct. 4	6027	...	...	,,	...	*8·0*	7·1	·9	
,, 26	6049	T.28	1	Ma.	$\delta+2·5$, $\epsilon+7$	8·5	7·8	·7	
Nov. 1	6055	T.	,,	Ch.	$\delta+10$, $\epsilon+8$	8·1	8·0	·1	
,, 4	6058	B.	,,	Or.	...	...	8·2	...	Invisible in Bin.
,, 7	6061	...	...	Co.	...	*8·5*	8·2	·3	
,, 15	6069	...	...	,,	...	*9·0*	8·4	·6	
,, 25	6079	...	...	,,	...	*9·5*	8·5	1·0	
Dec. 4	6088	...	...	,,	...	*9·0*	8·6	·4	
,, 21	6105	T.28	1	Ma.	$=\epsilon$	9·2	8·7	·5	
,, 23	6107	,,	,,	,,	$\epsilon+1$	9·1	8·7	·4	
1903.									
Jan. 2	6117	T.	2	Co.	$\epsilon-5$	9·7	8·7	1·0	
,, 3	6118	T.28	1	Ma.	$=\epsilon$	9·2	8·7	·5	

(806) o (MIRA) CETI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Jan. 23	6138	T.	1	Co.	$\epsilon+2\cdot5$	8·9	8·4	·5	
,, 28	6143	T.28	,,	Ma.	$\beta-6$, $\delta+2$	8·6	8·3	·3	
Feb. 1	6147	T.	2	Co.	$\epsilon+7\cdot5$	8·4	8·2	·2	
,, 13	6159	,,	,,	,,	$=\beta$	8·0	7·7	+ ·3	Record doubtful.
,, 21	6167	,,	,,	,,	M − 2	7·1	7·3	− ·2	
,, 28	6174	,,	,,	,,	= M	6·9	7·0	− ·1	
Sept. 2	6360	...	...	,,	...	7·9	7·3	+ ·6	
Oct. 16	6404	B.	1	Ma.	...	...	8·4	....	Invisible in Bin.
,, 25	6413	...	...	Co.	$\epsilon+2$	9·0	8·6	·4	
Nov. 14	6433	...	...	,,	$=\epsilon$	9·2	8·7	·5	
,, 15	6434	T.67	1	Ma.	$\epsilon-3$	9·5	8·7	·8	
,, 19	6438	T.28	,,	,,	$\epsilon-2$	9·4	8·7	·7	
Dec. 11	6460	T.	2	Co.	$=\epsilon$	9·2	8·6	·6	
1904.									
Jan. 3	6483	...	...	,,	$=\epsilon$	9·2	8·0	1·2	
,, 10	6490	...	...	,,	$\beta-6$, $\epsilon+6$	8·6	7·7	·9	
,, 13	6493	T.28	1	Ma.	$=\beta$	8·0	7·6	+ ·4	
,, 16	6496	,,	,,	,,	$\beta+5$	7·5	7·5	...	
,, 19	6499	T.28 & B.	,,	,,	$\alpha-3\cdot5$, $\beta+7\cdot5$	7·5	7·3	+ ·2	
,, 22	6502	B.	,,	,,	$\alpha+1\cdot5$	7·1	7·2	− ·1	
,, 22	6502	...	...	Co.	...	7·0	7·2	− ·2	
Feb. 6	6517	...	...	Co.	= R	4·8	6·3	− 1·5	
,, 6	6517	B.	1	Ma.	s + 5	4·9	6·3	1·4	Much < δ.
,, 13	6524	,,	,,	,,	m − 1, l + 1	4·0	5·9	1·9	
,, 13	6524	...	...	Co.	m − 1	4·2	5·9	1·7	
,, 14	6525	N.E.	2	Ma.	= m	4·1	5·8	1·7	
,, 15	6526	,,	1	,,	...	...	5·7	...	About 4·0.
,, 17	6528	,,	,,	Ch.	= k	3·6	5·6	2·0	
,, 18	6529	N.E. & B.	,,	Ma.	l + 2, k − 4, m + 2	3·8	5·5	1·7	
,, 18	6529	N.E.	1	Ast.	= m	4·1	5·5	1·4	
,, 18	6529	,,	,,	Ch.	k + 2	3·4	5·5	2·1	
,, 19	6530	,,	2	,,	k + 3	3·3	5·5	2·2	
,, 26	6537	,,	1	,,	g − 7, k + 2	3·4	5·0	1·6	
,, 28	6539	,,	,,	,,	g − 6, k + 3	3·3	4·8	1·5	
,, 28	6539	B.	3	Ast.	k − 1, l + 1	3·7	4·8	1·1	
,, 29	6540	...	...	Co.	g − 3, k + 6	3·0	4·8	1·8	
Mar. 1	6541	B.	2	Ast.	g − 5, k + 4	3·2	4·7	1·5	
,, 2	6542	N.E.	,,	Ch.	g − 4·5, k + 4·5	3·1	4·6	1·5	
,, 3	6543	,,	,,	,,	g − 2, k + 7	2·9	4·6	1·7	
,, 5	6545	,,	,,	,,	g − 3, k + 6	3·0	4·5	1·5	
,, 6	6546	,,	,,	,,	g − 3, k + 6	3·0	4·4	1·4	
,, 10	6550	B.	1	Ma.	g − 6, k + 3	3·3	4·1	·8	
,, 10	6550	...	...	Co.	g − 2·5	2·9	4·1	1·2	Record doubtful.
,, 14	6554	N.E.	2	Ch.	g − 4·5, k + 4·5	3·1	3·9	·8	
,, 16	6556	,,	,,	,,	g − 6, k + 3	3·3	3·8	·5	
,, 18	6558	,,	,,	,,	g − 7, k + 2	3·4	3·7	·3	
,, 21	6561	...	,,	Co.	g − 3	3·0	3·6	− ·6	

(806) o (MIRA) CETI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Sept. 3	6727	B.	1	Ma.	...	...	8·3	...	Invisible < 8·0.
,, 10	6734	...	2	Co.	$\delta - 1$, $\epsilon + 3$	8·9	8·4	+ ·5	
,, 17	6741	T.28	1	Ma.	$= \epsilon$	9·2	8·5	·7	
,, 18	6742	T.25	,,	Br.	$\gamma - 1·5$, $\delta + 0·5$	8·8	8·5	·3	
Oct. 3	6757	...	2	Co.	$\epsilon - 1$	9·3	8·7	·6	
,, 3	6757	T.28	1	Ma.	$\epsilon - 2$	9·4	8·7	·7	
,, 8	6762	,,	,,	,,	$\epsilon - 2$	9·4	8·7	·7	
,, 8	6762	T.25	,,	Br.	$\delta - 3$, $\epsilon + 1$	9·1	8·7	·4	
,, 11	6765	T.28	,,	Ma	$\epsilon - 1·5$	9·3	8·7	·6	
,, 12	6766	,,	,,	,,	$\epsilon - 1·5$	9·3	8·7	·6	
,, 13	6767	,,	,,	,,	$\epsilon - 2$	9·4	8·7	·7	
,, 29	6783	,,	,,	,,	$\epsilon - 4$	9·6	8·7	·9	
,, 29	6783	...	2	Co.	$\epsilon - 1$	9·3	8·7	·6	
Nov. 3	6788	T.28	1	Ma.	$\epsilon - 2·5$	9·4	8·7	·7	
,, 4	6789	T.	,,	My.	$\epsilon - 2$	9·4	8·7	·7	
,, 7	6792	T.40	,,	Br.	$\delta - 3$, $\epsilon + 1$	9·1	8·6	·5	
,, 9	6794	T.	,,	My.	$\epsilon - 2$	9·4	8·6	·8	
,, 12	6797	T.40	,,	Br.	$\delta - 3$, $\epsilon + 2$	9·1	8·5	·6	
,, 12	6797	T.28	,,	Ma.	$\epsilon - 1$	9·3	8·5	·8	
, 12	6797	...	...	Co.	$\epsilon - 1$	9·3	8·5	·8	
,, 14	6799	T.	1	My.	$= \epsilon$	9·2	8·5	·7	
,, 14	6799	T.28	,,	Ma.	$\epsilon - 2$	9·4	8·5	+ ·9	
,, 23	6808	T.25	2	Br.	$\delta - 2$, $\epsilon + 2$	9·0	8·2	+ ·8	
,, 26	6811	,,	1	,,	$= \delta$	8·8	8·1	·7	
,, 28	6813	T.	,,	My.	$\epsilon + 3$	8·9	8·1	·8	
,, 29	6814	T.28	,,	Ma.	$= \delta$, $\epsilon - 2$	9·1	8·0	1·1	Much < β.
Dec. 2	6817	T.25	,,	Br.	$= \delta$	8·8	7·9	·9	Very red.
, 5	6820	...	...	Co.	$= \epsilon$	9·2	7·8	1·4	
,, 5	6820	B.	1	Ma.	...	...	7·8	...	Invisible in Bin.
,, 6	6821	T.28	3	,,	$\epsilon - 2$	9·4	7·7	1·7	
,, 6	6821	T.25	2	Br.	$= \delta$	8·8	7·7	1·1	
,, 7	6822	T.	...	Wm.	$\delta + 2$, $\epsilon - 2$	9·0	7·7	1·3	
,, 7	6822	T.28	1	Ma.	$\epsilon - 1$	9·3	7·7	1·6	
, 8	6823	,,	,,	,,	$\epsilon - 1·5$	9·3	7·6	1·7	
,, 10	6825	,,	,,	,,	$= \epsilon$	9·2	7·6	1·6	
, 11	6826	T.	2	My.	$\epsilon + 8$	8·4	7·5	·9	
,, 13	6828	T.25	1	Br.	$\beta - 3$, $\gamma + 1·5$	8·4	7·4	1·0	
,, 13	6828	T.28	2	Ma.	$\epsilon + 1$	9·1	7·4	1·7	
,, 14	6829	,,	1	,,	$\epsilon + 2$	9·0	7·4	1·6	
,, 22	6837	T.25	2	Br.	$\alpha - 4·5$, $\beta + 3$	7·7	7·0	+ ·7	
,, 25	6840	T.	,,	My.	P – 5	6·4	6·9	– ·5	
,, 30	6845	T.25	1	Br.	$\alpha - 5$, $\beta + 2$	7·8	6·6	+ 1·2	
,, 30	6845	T.28	,,	Ma.	N – 12, $\beta + 12$	6·8	6·6	+ ·2	*

(1855) R AURIGÆ.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Sept. 21	5284	B.	1	Pe.	d – 6	8·3	8·5	– ·2	
1901.									
Aug. 9	5606	T.60	,,	Ch.	8 – 3, 12 – 1	9·7	9·7	0	
,, 13	5610	,,	,,	,,	8 – 3, = 12	9·7	9·6	+ ·1	
,, 21	5618	,,	,,	,,	8 + 6, 5 + 3	8·6	9·5	– ·9	
Sept. 9	5637	,,	,,	,,	8 + 3, 5 – 2, 4 – 2	9·0	9·0	0	Orange.
Oct. 3	5661	,,	2	,,	3 + 3	7·9	8·2	– ·3	
,, 7	5665	T.30	,,	,,	3 + 3, 2 + 2	7·7	8·1	·4	
,, 18	5676	,,	1	,,	3 + 6	7·6	7·7	– ·1	Bright orange.
Nov. 28	5717	,,	,,	,,	3 – 3, 4 + 3	8·5	8·0	+ ·5	
Dec. 8	5727	T.95	,,	,,	3 + 3, 2 + 2	7·7	8·2	– ·5	
,, 27	5746	,,	2	,,	3 – 1, 4 – 4, 5 + 2	8·7	8·7	0	Very red.
1902.									
Jan. 5	5755	,,	1	,,	4 – 3, 5 – 2, 8 + 3, 9 + 3	9·1	8·9	+ ·2	Dull red.
Feb. 9	5790	,,	,,	,,	= 23, 25 + 2, 26 + 4	10·9	10·0	·9	
,, 28	5809	,,	3	,,	25 – 8, 34 + 3	12·0	10·7	1·3	
Mar. 25	5834	,,	,,	,,	43 + 2	12·6	11·7	·9	
Apr. 23	5863	T.160	,,	,,	= 43	12·8	12·7	·1	
,, 24	5864	,,	,,	,,	...	...	12·8	...	< 12·5.
,, 27	5867	,,	,,	,,	43 – 6	13·4	12·9	+ ·5	
Oct. 10	6033	T.95	1	,,	8 – 4, = 16	9·8	10·1	– ·3	
,, 21	6044	,,	,,	,,	8 – 3, 9 – 1	9·6	10·0	– ·4	Red.
Nov. 1	6055	,,	,,	,,	8 – 4, 12 – 1	9·8	9·8	0	
1903.									
Jan. 23	6138	T.	,,	Co.	= 3	8·2	7·6	+ ·6	
Feb. 1	6147	,,	2	,,	3 – 4, 14 + 5	9·2	7·4	1·8	
,, 13	6159	,,	,,	,,	3 – 3, 4 + 3	8·5	7·7	·8	*
,, 21	6167	,,	,,	,,	3 – 3, 4 + 3	8·5	7·8	·7	*
,, 28	6174	,,	,,	,,	3 – 3, 4 + 3	8·5	8·0	·5	*
,, 28	6174	,,	1	Ma.	8 + 1·5	9·1	8·0	1·1	
Mar. 3	6177	,,	,,	,,	8 + 5	8·8	8·0	·8	
,, 16	6190	,,	,,	,,	= 8	9·3	8·3	1·0	
,, 16	6190	,,	...	Co.	4 – 2·5, 8 + 2·5	9·1	8·3	·8	
,, 28	6202	,,	...	,,	8 + 1	9·2	8·7	·5	
Apr. 2	6207	,,	...	,,	= 8	9·3	8·7	·6	
,, 11	6216	,,	...	,,	8 – 1	9·4	9·0	·4	
,, 24	6229	,,	...	,,	21 – 2	10·8	9·5	1·3	

(1855) R AURIGÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
May 15	6250	T.	...	Co.	...	*11·5*	10·2	1·3	
,, 24	6259	,,	...	,,	..	*11·0*	10·5	+ ·5	
Aug. 25	6352	,,	...	,,	...	...	13·4	...	Invisible in 6½ inch.
Sept. 2	6360	,,	...	,,	...	...	13·5	...	,, ,,
Oct. 15	6403	,,	...	,,	27+2	11·7	12·9	−1·2	
,, 25	6413	,,	...	,,	12−1	9·8	12·6	2·8	
Nov. 14	6433	,,	...	,,	8−2	9·5	11·9	2·4	
Dec. 11	6460	,,	...	,,	=8	9·3	10·9	1·6	
,, 24	6473	,,	...	,,	=8	9·3	10·4	1·1	About.
1904.									
Jan. 3	6483	,,	...	,,	8+1	9·2	10·2	1·0	
,, 10	6490	,,	...	,,	8+1	9·2	10·1	·9	
,, 14	6494	,,	...	Ma.	=8	9·3	10·1	·8	
,, 22	6502	,,	...	,,	8+0·5	9·2	10·9	·8	
Feb. 6	6517	,,	...	Co.	...	*8·0*	9·8	−1·8	
Mar. 10	6550	T.	...	Co.	...	*8·0*	9·0	−1·0	*
,, 10	6550	T.	...	Ma.	4+5, 10+5, =d	8·4	9·0	·6	
,, 21	6561	,,	...	Co.	...	*7·5*	8·6	1·1	*
Apr. 3	6574	T.	1	Ma.	3+5, =d	7·7	8·2	·5	
,, 6	6577	T.	...	Co.	3+2	8·0	8·1	·1	
,, 9	6580	,,	2	Ma.	3+3·5, d+2	7·8	8·0	·2	
,, 12	6583	,,	,,	,,	=d	7·7	7·9	− ·2	
May 2	6603	,,	1	,,	3−3, 8+4	8·7	7·4	+1·3	
,, 18	6619	,,	...	Co.	8+5	8·8	7·7	1·1	
June 3	6635	,,	...	,,	=8	9·3	8·0	1·3	
July 12	6674	T.	...	,,	8−5	9·8	9·0	·8	
Aug. 2	6695	,,	...	,,	...	*10·5*	9·6	·9	*
,, 11	6704	,,	1	Ma.	...	...	10·0	...	Invisible < 9·0.
,, 17	6710	,,	,,	,,	...	...	10·2	...	,, ,,
Sept. 3	6727	,,	,,	,,	...	...	10·9	...	,, ,,
,, 3	6727	,,	,,	Co.	...	*11·0*	10·9	+ ·1	Very faint.
,, 15	6739	,,	,,	Ma.	...	...	11·3	...	Invisible < 9·0.
,, 17	6741	,,	,,	,,	...	...	11·4	...	,, ,,
Oct. 3	6757	,,	,,	,,	...	...	12·0	...	,, ,,
,, 3	6757	,,	...	Co.	...	...	12·0	...	Invisible < 12·0.
,, 11	6765	,,	1	Ma.	...	...	12·2	...	,, < 9·0.
,, 29	6783	,,	...	Co.	...	..	12·9	...	,, < 12·0.
Nov. 12	6797	,,	...	,,	...	...	13·2	...	,, < 11·5.
,, 14	6799	,,	1	Ma.	...	...	13·2	...	,, < 9·0.
Dec. 5	6820	,,	...	Co.	...	*12·0*	13·5	−1·5	
,, 14	6829	,,	1	Ma.	...	...	13·5	...	Invisible < 9·0.

(2100) U ORIONIS.

NOTE.

Data for mean curve:—Period, 375 d. $M-m$, 148 d. Variation, 7·0 m. to 12·3 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Jan. 26	4681	B.	2	Ma.	...	...	10·0	...	Invisible.
,, 27	4682	,,	,,	,,	...	...	10·0	...	,,
,, 28	4683	,,	1	,,	...	...	9·9	...	,, <8·5.
Feb. 2	4688	,,	,,	,,	...	...	9·7	...	,,
,, 13	4699	,,	,,	,,	...	...	9·0	...	,,
,, 22	4708	,,	2	,,	...	...	8·5	...	,,
,, 26	4712	,,	,,	,,	...	...	8·2	...	,, <8·5.
,, 27	4713	,,	,,	,,	...	..	8·1	...	,,
,, 28	4714	,,	1	,,	...	...	8·1	...	,,
Mar. 1	4715	,,	,,	,,	4−3·5, 5+3·5	7·5	8·0	− ·5	
,, 2	4716	,,	2	,,	...	...	8·0	...	Suspected.
,, 3	4717	,,	1	,,	...	8·8	7·9	+ ·9	Just visible.
,, 4	4718	,,	,,	,,	f−12, 4+4	7·3	7·9	− ·6	
,, 5	4719	,,	,,	,,	f−10	7·6	7·8	·2	
,, 6	4720	,,	2	,,	f−10	7·6	7·8	·2	
,, 7	4721	,,	1	,,	f−10	7·6	7·8	·2	
,, 9	4723	,,	,,	,,	f−7#5	7·4	7·7	·3	
,, 13	4727	,,	,,	,,	f−5	7·1	7·5	·4	
,, 14	4728	,,	2	,,	f−4	7·0	7·5	·5	
,, 15	4729	,,	3	,,	f−3	6·9	7·4	·5	
,, 16	4730	,,	,,	,,	f−3	6·9	7·4	·5	
,, 20	4734	,,	2	,,	f+1, e−6·5	6·6	7·3	·7	
,, 24	4738	,,	,,	,,	e−2·5	6·3	7·2	·9	Difficult.
,, 26	4740	,,	,,	,,	f+6, e−3, d−6	6·2	7·2	1·0	
Apr. 3	4748	,,	,,	,,	f+2, e−8, d−10	6·7	7·0	·3	
,, 8	4753	,,	,,	,,	f+2, e−4, d−7	6·4	7·0	·6	
Nov. 11	4970	T.28	3	,,	...	...	12·3	...	Invisible.
1900.									
Jan. 18	5038	B.	1	,,	...	...	10·9	...	,, <8·5.
,, 24	5044	,,	,,	Or.	...	...	10·6	...	,, <8·0.
,, 29	5049	T.28	2	Ma.	41+2	10·0	10·4	·4	
Feb. 4	5055	B.	3	Or.	...	...	10·1	...	Invisible <8·0.
,, 6	5057	T.28	,,	Ma.	41+3	9·9	10·0	·1	
,, 6	5057	T.76	2	Wl.	=15	9·0	10·0	1·0	
,, 7	5058	,,	,,	,,	=15	9·0	9·9	·9	
,, 16	5067	B.	,,	Or.	...	...	9·5	...	Invisible <8·0.
,, 17	5068	T.76	3	Wl.	11−1, 15+2	8·9	9·4	·5	
,, 20	5071	B.	1	Ma.	...	...	9·2	...	Invisible.
,, 23	5074	T.76	3	Wl.	11−1, 15+3	8·8	9·0	·2	
,, 25	5076	B.	2	Ma.	...	...	8·9	...	Invisible.

(2100) U ORIONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Mar. 1	5080	B.	1	Ma.	...	...	8·6	...	Suspected.
,, 2	5081	,,	,,	Or.	...	...	8·6	...	Invisible < 8·5.
,, 4	5083	,,	,,	Ma.	...	...	8·5	...	Suspected.
,, 5	5084	T.28	3	,,	4−3·5, 5+3·5	7·5	8·4	·9	
,, 11	5090	T.	2	Mi.	=h	7·6	8·1	·5	
,, 12	5091	,,	,,	,,	=h	7·6	8·1	·5	
,, 12	5091	B.	,,	Ma.	...	...	8·1	...	Invisible.
,, 13	5092	T.38	2	Wl.	f−2, g+2	6·8	8·0	1·2	
,, 14	5093	,,	,,	,,	f−2, g+2	6·8	8·0	1·2	
,, 15	5094	,,	3	,,	f−1, g+3	6·7	7·9	−1·2	
,, 15	5094	B.	2	Ma.	...	7·5±	7·9	− ·4	Just visible.
,, 16	5095	T.28	,,	,,	f−3, 4+4	6·8	7·8	1·0	
,, 17	5096	B.	1	Or.	...	6·4	7·8	1·4	Above f, but below d and e, nearer f.
,, 17	5096	,,	3	Ma.	f−5	7·1	7·8	·7	
,, 19	5098	,,	1	Or.	...	6·5	7·7	1·2	Very little above f, but much below d and e.
,, 19	5098	,,	2	Mi.	=g	7·0	7·7	·7	Doubtful obs.
,, 20	5099	,,	1	,,	=g	7·0	7·7	·7	
,, 20	5099	,,	,,	Or.	...	6·5	7·7	1·2	As on 19th.
,, 20	5099	...	2	Ke.	...	...	7·7	...	Doubtful est., 8·0.
,, 20	5099	Fi.8	1	Wl.	e−4, f+2	6·4	7·7	1·3	,,
,, 24	5103	,,	,,	,,	e−5, f+1	6·5	7·5	1·0	,,
,, 26	5105	,,	2	,,	e−4, f+2	6·4	7·5	1·1	,,
,, 26	5105	B.	1	Mi.	=f	6·6	7·5	·9	
,, 26	5105	,,	,,	Ma.	f−2·5	6·9	7·5	·6	
,, 26	5105	...	2	Ke.	f−4·5, g−1	7·1	7·5	·4	
,, 28	5107	B.	1	Mi.	=f	6·6	7·4	·8	
,, 29	5108	Fi.8	,,	Wl.	e−4, f+2	6·4	7·4	1·0	Doubtful.
,, 30	5109	T.28	2	Ma.	f−2·5	6·9	7·3	·4	
,, 31	5110	B.	3	,,	f−2	6·8	7·3	·5	
,, 31	5110	,,	1	Mi.	e−3, f+2	6·4	7·3	·9	
,, 31	5110	...	2	Ke.	g−1	7·1	7·3	·2	
Apr. 1	5111	B.	1	Mi.	e−3, f+2	6·4	7·3	·9	
,, 1	5111	,,	2	Ma.	...	...	7·3	...	Invisible < f.
,, 2	5112	F.8	,,	Wl.	=f	6·6	7·2	·6	
,, 7	5117	,,	,,	,,	f−1	6·7	7·1	·4	
,, 9	5119	B.	2	Mi.	=f	6·6	7·1	·5	
,, 12	5122	...	,,	Ke.	f−3	6·9	7·1	·2	
,, 13	5123	B.	,,	Ma.	f−1	6·7	7·0	·3	
,, 15	5125	,,	,,	,,	=f	6·6	7·0	·4	
,, 15	5125	B.&T.	1	Mi.	e−2, f+2	6·3	7·0	·7	
,, 16	5126	T.28	,,	Ma.	f+2	6·4	7·0	·6	
,, 16	5126	...	2	Ke.	f−2·5	6·9	7·0	·1	
,, 17	5127	...	,,	,,	=f	6·6	7·0	·4	
,, 17	5127	B.	1	Ma.	f+1	6·5	7·0	·5	
,, 17	5127	F.8	,,	Wl.	f−2, g+2	6·8	7·0	·2	
,, 18	5128	T.28	2	Ma.	f+2	6·4	7·0	·6	
,, 19	5129	B.	2	Or.	d−4, f+4	6·2	7·0	·8	
,, 19	5129	...	1	Ke.	f−1·5, =g	6·9	7·0	·1	
,, 19	5129	F.8	,,	Wl.	=f	6·6	7·0	·4	
,, 20	5130	B.	,,	Or.	d−3	6·1	7·0	·9	
,, 20	5130	B.&T.	,,	Mi.	e−3, f+2	6·4	7·0	·6	
,, 20	5130	...	,,	Ke.	f−2, g+2	6·8	7·0	·2	

(2100) U ORIONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Apr. 21	5131	T.28	2	Ma.	f+2	6·4	7·0	·6	
,, 21	5131	F.8	1	Wl.	f+1	6·5	7·0	·5	
,, 23	5133	T.28	3	Ma.	f+1	6·5	7·0	·5	
,, 25	5135	T.	1	Mi.	e−2, f+3	6·3	7·1	·8	
,, 26	5136	T.28	2	Ma.	d−4, f+2	6·3	7·1	·8	
,, 28	5138	,,	,,	,,	d−5, f+2	6·4	7·1	−·7	
,, 28	5138	B.	1	Or.	e−3, f+3	6·3	7·1	−·8	
May 5	5145	T.28	3	Ma.	f+1·5	6·5	7·2	·7	
,, 7	5147	,,	2	,,	d−4·5, f+3	6·3	7·2	·9	
Sept. 24	5287	B.	1	Wl.	...	...	11·1	...	Invisible.
,, 30	5293	T.76	,,	,,	41−4	10·6	11·3	·7	
Dec. 15	5369	T.28	,,	Ma.	...	...	12·2	...	Invisible.
1901.									
Jan. 7	5392	,,	,,	,,	41−3	10·5	11·3	1·3	Just glimpsed.
,, 8	5393	T.120	,,	,,	41−5	10·7	11·7	1·0	
,, 9	5394	B.	2	Or.	...	...	11·7	...	Invisible<8·0.
,, 14	5399	T.	1	,,	=1·5	9·0	11·5	2·5	Doubtful.
,, 14	5399	T.67	,,	Ma.	41−5	10·7	11·5	·8	
Feb. 5	5421	B.	2	,,	...	...	10·6	...	Invisible.
,, 6	5422	T.	,,	Or.	...	...	10·5	...	Doubtful<8·6.
,, 12	5428	T.67	,,	Ma.	41+1·5	10·0	10·2	−·2	
,, 14	5430	T.120	1	,,	41+1	10·1	10·1	·0	
,, 24	5440	B.	,,	,,	...	...	9·6	...	Invisible.
Mar. 3	5447	...	...	Co.	...	*10·0*	9·2	+0·8	
,, 6	5450	T.28	2	Ma.	11−6, 41+6	9·5	9·0	·5	
,, 8	5452	,,	1	,,	11−4, 41+8	9·3	8·8	·5	
,, 12	5456	T.120	,,	,,	11−1·5	9·0	8·6	+·4	
,, 14	5458	B.	2	,,	...	...	8·5	...	Invisible.
,, 16	5460	T.28	,,	,,	=5	7·9	8·4	−·5	
,, 18	5462	T.38	1	Wl.	h−2, k+1	7·8	8·2	·4	Very ruddy.
,, 19	5463	T.28	,,	Ma.	4−3·5, 5+3·5	7·5	8·2	·7	
,, 21	5465	...	...	Co.	...	*7·9*	8·1	·2	
,, 22	5466	T.28	1	Ma.	=4	7·2	8·1	−·9	Warm, ruddy hue.
,, 22	5466	T.	2	Ke.	11+2·5	8·6	8·1	+·5	
,, 24	5468	T.28	,,	Ma.	4+3	6·9	8·0	−1·1	Ruddy.
,, 25	5469	T.	,,	Or.	4+7	6·5	7·9	1·4	Approximately.
,, 28	5472	,,	,,	,,	4+10, h+5, =g	6·8	7·8	1·0	
,, 28	5472	T.28	,,	Ma.	4+3	6·9	7·8	·9	
,, 29	5473	...	...	Co.	...	*7·5*	7·7	·2	
,, 30	5474	T.	1	Or.	4+10, h+5, f−10	7·0	7·7	·7	
Apr. 1	5476	,,	,,	,,	f−1, g+3	6·7	7·6	·9	
,, 5	5480	,,	,,	,,	f−3, g+2	6·9	7·5	·6	
,, 8	5483	...	...	Co.	...	*7·1*	7·4	·3	Very red.
,, 9	5484	T.30	,,	Ch.	f−5	7·1	7·3	·2	
,, 10	5485	,,	,,	,,	f−4, 4+6	6·3	7·3	·5	
,, 10	5485	T.	,,	Or.	f−3, g+1	6·9	7·3	·4	
,, 12	5487	...	...	Co.	...	*7·0*	7·2	·2	
,, 12	5487	T.30	1	Ch.	f−3	6·9	7·2	·3	
,, 12	5487	B.	3	Ma.	...	...	7·2	...	Just glimpsed.

(2100) U ORIONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Apr. 13	5488	T.30	1	Ch.	f−4	7·0	7·2	·2	
,, 15	5490	B.	,,	Or.	f−2	6·8	7·2	− ·4	
,, 16	5491	,,	2	Ke.	g−4	7·4	7·1	+ ·3	
,, 19	5494	,,	,,	,,	g−4	7·4	7·1	+ ·3	
,, 19	5494	T.	1	Or.	f−2, g+2	6·8	7·1	− ·3	
,, 19	5494	T.30	,,	Ch.	f−3	6·9	7·1	·2	
,, 20	5495	,,	,,	,,	f−4	7·0	7·1	− ·1	
,, 20	5495	T.	1	Or.	f−3, g+3	6·8	7·1	− ·3	Red.
,, 21	5496	...	...	Co.	...	*7·2*	7·1	+ ·1	
,, 21	5496	T.30	1	Ch.	f−3	6·9	7·1	− ·2	
,, 26	5501	T.28	3	Ma.	=f	6·6	7·0	·4	Ruddy.
,, 27	5502	T.	2	Or.	f−2, g+3	6·8	7·0	− ·2	
,, 28	5503	...	...	Co.	...	*7·4*	7·0	+ ·4	
,, 29	5504	T.28	3	Ma.	=f	6·6	7·0	− ·4	
May 11	5516	,,	2	Ma.	f−2	6·8	7·1	·3	
,, 14	5519	,,	,,	,,	f−4·5	7·1	7·2	·1	
,, 15	5520	,,	,,	,,	f−5	7·1	7·2	·1	Difficult.
Oct. 18	5676	T.90	3	Ch.	=45	11·2	11·4	·2	
Nov. 16	5705	T.67	2	Ma.	...	..	12·1	...	Not seen < 10·2.
Dec. 18	5737	T.28	...	Ma.	...	...	12·3	...	Not > 10·2.
,, 29	5748	T.67	...	,,	=41	10·2	12·2	2·0	
1902.									
Jan. 5	5755	T.28	...	,,	41−2	10·4	12·1	1·7	
,, 5	5755	T.95	...	Ch.	41−3, 45−2	10·9	12·1	1·2	
,, 31	5781	,,	,,	,,	41+6, 21−4, 29−2	9·9	11·2	1·3	
Feb. 8	5789	...	...	Co.	...	*9·8*	10·9	1·1	
,, 9	5790	T.95	2	Ch.	=31, 41+3	9·9	10·9	1·0	
,, 10	5791	B.	1	Ma.	...	...	10·8	...	Invisible.
,, 27	5808	T.95	,,	Ch.	9−3, 11−2, =15, 21+5, 29+8	9·0	10·0	1·0	
,, 28	5809	,,	,,	,,	=9, 11+3, 15+4, 21+6, 29+9	8·8	9·9	1·1	
Mar. 5	5814	,,	,,	,,	7−2, 9+3, 11+4, 15+6, 21+8	8·5	9·7	1·2	
,, 12	5821	...	...	Co.	...	*9·0*	9·2	− ·2	
,, 13	5822	B.	2	Ma.	...	...	9·2	...	Invisible < 8·2.
,, 21	5830	...	...	Co.	...	*8·5*	8·2	+ ·3	
,, 23	5832	T.30	2	Ry.	4−1	7·3	8·6	− 1·3	
,, 25	5834	,,	,,	,,	4−0·5	7·2	8·4	1·2	
,, 25	5834	T.95	1	Ch.	4+2, 5+5, 6+8	7·3	8·4	1·1	
,, 28	5837	T.30	1	Ry.	=4	7·2	8·2	− 1·0	
,, 28	5837	...	...	Co.	...	*8·4*	8·2	+ ·2	
,, 28	5837	B.	1	Ma.	...	...	8·2	...	Glimpsed, say 8·3.
,, 30	5839	...	...	Co.	...	*8·3*	8·1	·2	
,, 31	5840	...	...	,,	...	*8·2*	8·1	+ ·1	
Apr. 1	5841	...	...	,,	...	*8·0*	8·0	·0	
,, 1	5841	T.30	1	Ry.	4+1·5	7·0	8·0	− 1·0	
,, 2	5842	...	...	Co.	...	*7·7*	8·0	·3	

(2100) U ORIONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C	Remarks.
1902.									
Apr. 3	5843	T.30	1	Ry.	4+2	7·0	7·9	·9	
,, 3	5843	T.95	2	Ch.	d−7, 4+6	6·5	7·9	1·4	
,, 5	5845	...	...	Co.	...	*7·2*	7·9	·7	
,, 7	5847	...	...	,,	...	*6·9*	7·8	·9	
,, 10	5850	T.30	1	Ry.	f+3, d−2	6·2	7·7	1·5	
,, 13	5853	,,	,,	,,	f+3, d−1	6·1	7·5	1·4	
,, 14	5854	,,	2	,,	f+3, d−1	6·1	7·5	1·4	
,, 16	5856	,,	,,	,,	d−0·5	5·9	7·4	1·5	
,, 16	5856	T.28	,,	Ma.	=e	6·0	7·4	1·4	
,, 18	5858	,,	,,	,,	e−4, f+2	6·4	7·4	−1·0	Ruddy.
,, 18	5858	F.	2	Ch.	d+4, e+3	5·6	7·4	−1·8	
,, 20	5860	T.30	,,	Ry.	=d, f+3·5	6·0	7·3	1·3	
,, 23	5863	F.	,,	Ch.	d+4 e+5	5·5	7·2	1·7	
,, 23	5863	...	...	Co.	...	*6·2*	7·2	1·0	
,, 24	5864	,,	,,	Ch.	d+2, e+3, f+4	5·8	7·2	1·4	
,, 28	5868	,,	,,	,,	d+4, f+8, e+3	5·6	7·1	·5	
,, 28	5868	T.30	1	Ry.	=d, f+3	6·1	7·1	1·0	
,, 28	5868	B.	,,	Wl.	f+3, e−2	6·3	7·1	·8	
,, 30	5870	T.12	3	LeB.	d+2, c−4	5·6	7·1	− ·5	
May 1	5871	B.	2	Wl.	f+4, d−2	6·1	7·1	·0	
,, 2	5872	T.28	,,	Ma.	f+4·5, e−1·5	6·2	7·0	− ·8	
,, 3	5873	,,	,,	,,	e−1	6·1	7·0	·9	
,, 3	5873	T.18	,,	Wl.	f+2, d−4	6·3	7·0	·7	
,, 3	5873	T.30	1	Ry.	f+3·5, d−0·5	6·1	7·0	·9	
,, 4	5874	,,	,,	,,	d−0·5	5·9	7·0	1·1	
,, 4	5874	B.	2	Ma.	f+3, e−3	6·3	7·0	·7	
,, 4	5874	T.26	3	Wl.	f−2, g+4	6·7	7·0	·3	
,, 5	5875	,,	2	,,	f−3, g+2	6·9	7·0	·1	
,, 8	5878	,,	1	,,	d−4, f+2	6·3	7·0	·7	
,, 8	5878	T.28	3	Ma.	f+2	6·4	7·0	·6	Ruddy.
,, 8	5878	...	...	Co.	...	*6·1*	7·0	·9	
,, 10	5880	T.28	2	Ma.	f+3, e−3	6·3	7·0	·7	
,, 10	5880	T.26	,,	Wl.	d−4	6·2	7·0	·8	
,, 11	5881	,,	,,	,,	f+2, d−4	6·3	7·0	·7	
,, 13	5883	T.28	,,	Ma.	=e	6·0	7·0	−1·0	Ruddy.
Sept. 4	5997	...	...	Co.	...	*10·0*	9·9	+ ·1	
Oct. 1	6024	...	...	,,	...	*11·2*	10·7	+ ·5	
,, 16	6039	...	...	,,	...	*11·0*	11·2	− ·2	
Nov. 1	6055	T.95	1	Ch.	43−4, 45−2	11·4	11·6	·2	
,, 7	6061	...	...	Co.	...	*11·0*	11.7	·7	
Dec. 4	6088	...	...	,,	...	*12·0*	12 2	·2	Doubtful obs.
,, 20	6104	...	...	,,	...	*11·3*	12.3	1·0	
,, 21	6105	T.28	1	Ma.	41−1	10·3	12·3	2·0	Doubtful obs.
,, 31	6115	...	...	Co	...	*10·8*	12·3	1·5	
1903.									
Jan. 2	6117	T.	2	,,	...	*9·3*	12·2	2·9	
,, 3	6118	T.28	1	Ma.	...	...	12·2	...	Not fairly seen.
,, 23	6138	B.	...	,,	...	...	11·8	...	Invisible.
,, 23	6138	T.	...	Co.	...	*11·1*	11·8	·7	
,, 28	6143	T.28	1	Ma.	41−1	10·3	11·7	1·4	

(2100) U ORIONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Feb. 1	6147	T.	1	Co.	...	*11·3*	11·6	·3	
,, 13	6159	,,	,,	,,	...	*10·8*	11·1	·3	
,, 17	6163	T.28	,,	Ma.	41+0·5	10·1	10·9	·8	
,, 21	6167	T.	,,	Co.	...	*10·0*	10 7	·7	
,, 28	6174	,,	,,	,,	=29	9·9	10·4	·5	
,, 28	6174	T.28	,,	Ma.	41 – 1	10·3	10·4	·1	
Mar. 3	6177	,,	,,	,,	41+5	9·7	10·3	·6	
,, 16	6190	,,	,,	,,	11+2	8·7	9·6	·9	
,, 16	6190	T.	1	Co.	11+2	8·7	9·6	·9	
,, 22	6196	,,	...	,,	4–3, 5+3	7·5	9·2	1·7	
,, 28	6202	T.	...	Co.	4+3	6·9	8·8	– 1·9	
,, 30	6204	,,	...	,,	...	*7·5*	8·2	·7	
Apr. 2	6207	,,	...	,,	f – 4	7·0	8·5	1·5	
,, 7	6212	T.28	1	Ma.	=f	6·6	8·2	1·6	
,, 8	6213	T.	...	Co.	f+1	6·5	8·2	1·7	
,, 13	6218	,,	...	,,	f+4, d – 4	6·2	8·0	1·8	
,, 19	6224	,,	...	,,	f+3, e – 3	6·3	7·7	1·4	
,, 22	6227	T.28	1	Ma.	f+2, e – 4	6·4	7·6	1·2	
,, 24	6229	T.	...	Co.	f+3, e – 3	6·3	7·5	1·2	
,, 24	6229	B.	2	Wl.	f+4, e – 3	6·3	7·5	1·2	
,, 25	6230	,,	,,	,,	f+3, e – 2	6·3	7·4	1·1	
,, 27	6232	,,	,,	,,	f+3, e – 5	6·4	7·4	1·0	
,, 29	6234	,,	3	,,	f+2, e – 6	6·5	7·3	·8	
May 2	6237	,,	2	,,	=f	6·6	7·2	·6	
,, 3	6238	,,	,,	,,	f+2, e – 5	6·5	7·2	·7	
,, 6	6241	,,	,,	,,	f – 2	6·8	7·1	·3	
,, 7	6242	,,	,,	,,	=f	6·6	7·1	·5	
,, 11	6246	,,	,,	,,	f – 2	6·8	7·1	·3	
,, 13	6248	,,	1	,,	f – 2	6·8	7·0	·2	
,, 15	6250	,,	,,	,,	f+1, e – 5	6·5	7·0	·5	
,, 16	6251	,,	,,	,,	f – 2	6·8	7·0	·2	
,, 22	6257	,,	,,	,,	f – 3	6·9	7·0	– ·1	
,, 23	6258	,,	,,	,,	f – 5	7·1	7·0	+ ·1	
Sept. 2	6360	...	...	Co.	41+4	9·8	9·6	+ ·2	
Oct. 25	6413	...	...	,,	41 – 6	10·8	11·1	– ·3	
Nov. 14	6433	...	...	,,	41 – 4	10·6	11·6	1·0	
,, 15	6434	T.28	1	Ma.	41+2	10·0	11·6	1·6	
Dec. 24	6473	...	...	Co.	41 – 8	11·0	12·3	1·3	Very faint.
1904.									
Jan. 10	6490	...	..	,,	41 – 8	11·0	12·3	1·3	,, ,,
,, 10	6490	B.	2	Ma.	...	...	12·3	...	Invisible.
,, 13	6493	T.28	1	,,	...	...	12·2	...	<11·0.
,, 16	6496	,,	,,	,,	41 – 2	10·4	12·2	1·8	
,, 19	6499	,,	,,	,,	=41	10·2	12·2	2·0	
,, 22	6502	...	...	Co.	41 – 6	10·8	12·1	1·3	
Feb. 6	6517	...	...	,,	41 – 3	10·4	11 7	1·3	
,, 6	6517	T.28	1	Ma.	41+2	10·0	11·7	1·7	

(2100) U ORIONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Feb. 13	6524	T.28	I	Ma.	41 – 5	10·7	11·5	·8	
,, 14	6525	,,	,,		41 – 5	10·7	11·5	·8	
,, 15	6526	,,	,,	,,	41 – 2	10·3	11·4	1·1	
Mar. 10	6550	,,	,,	,,	41 + 2	10·0	10·4	·4	
,, 10	6550	...	...	Co.	39 + 5	10·1	10·4	·3	
,, 21	6561	...	...	,,	11 – 5, 41 + 8	9·4	9·8	·4	
Apr. 3	6574	T.28	I	Ma.	5 – 3, 7 + 1	8·3	9·0	·7	
,, 6	6577	...	...	Co.	...	7·8	8·8	1·0	Doubtful.
,, 9	6580	T.28	I	Ma.	4 + 3	6·9	8·7	1·8	
,, 12	6583	,,	,,	,,	4 + 5	6·7	8·5	1·8	
,, 16	6587	...	...	Co.	f – 2	6·8	8·3	1·5	
,, 25	6596	...	...	,,	= f	6·6	7·9	– 1·3	
May 2	6603	...	...	Co.	f – 2	6·8	7·5	– ·7	Rather doubtful.
,, 2	6603	T.28	I	Ma.	d – 6, f + 2	6·4	7·5	1·1	
Sept. 10	6734	...	...	Co.	11 – 4	9·3	9·6	·3	Much > 41.
Nov. 12	6797	...	...	,,	41 – 1	10·3	11·3	1·0	
Dec. 5	6820	...	...	,,	41 – 1	10·3	11·9	– 1·6	
,, 5	6820	B.	I	Ma.	...	...	11·9	...	Invisible.

(2213) η GEMINORUM.

NOTES.

This star does not occur in Hagen's Atlas, nor in vol. XXXVII. of the Annals H.C.O. The magnitudes of the comparison stars have been derived from the R.H.P., and the references are as follows:—

$a = \zeta$ Geminorum	3·02 m.	$g = \lambda$ Geminorum	3·66 m.
$b = \mu$,,	3·16 ,,	$h = \iota$,,	3·78 ,,
$c = \epsilon$,,	3·18 ,,	$k = \nu$,,	4·16 ,,
$d = \xi$,,	3·45 ,,	$l = \upsilon$,,	4·26 ,,
$e = \delta$,,	3·54 ,,	$m = 1$,,	4·14 ,,
$f = \kappa$,,	3·62 ,,	$n = \zeta$ Tauri	3·02 ,,

No definite variation or period appears to be traceable from the observations of the Variable Star Section, and it has, therefore, not been considered necessary to calculate the theoretical brightness. The residuals would be very large and irregular, and merely indicate that our observations do not support the period of variation given in the Catalogues of H.C.O., or Chandler, viz. 231·4 d. Variation 3·2 m. to 4·2 m.

N.B.—Since the above was written, Series V. of the "Atlas Stellarum Variabilium" has appeared, and η Geminorum is included therein.—E. E. M.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Jan. 1	4656	N.E.	...	Be.	...	*3·3*			
,, 4	4659	,,	...	,,	...	*3·3*			
,, 7	4662	,,	...	,,	...	*3·3*			
,, 11	4666	,,	...	,,	..	*3·3*			
,, 16	4671	,,	...	,,	...	*3·4*			
,, 26	4681	,,	2	Ma.	b − 7, = c	3·5			
Feb. 2	4688	,,	1	,,	b − 6, c − 4, k + 12, e + 3, m + 20	3·1			
,, 10	4696	,,	...	Be.	...	*3·4*			
,, 27	4713	,,	3	Ma.	b − 7, c − 2, e + 7, k + 10	3·3			
,, 28	4714	,,	1	,,	b − 6, = c, e + 5, k + 8	3·3			
Mar. 1	4715	,,	,,	,,	b − 6, c − 1, e + 6, k + 10	3·3			
,, 2	4716	,,	2	,,	b − 6, c − 1, c + 2, k + 5	3·5			
,, 4	4718	,,	1	,,	b − 4, c − 1, e + 10, k + 15	3·0	...	...	Ruddy.
,, 5	4719	,,	2	,,	b − 4, = c, e + 6, k + 10	3·2			
,, 9	4723	,,	1	,,	b − 3, c − 1, e + 7, k + 10, n − 1	3·2			
,, 13	4727	,,	,,	,,	b − 1, c + 1, e + 15 k + 17, n − 1	2·8			

(2213) η GEMINORUM—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Mar. 14	4728	N.E.	2	Ma.	b−2=c, e+7, k+12, n−4	3·2			
,, 15	4729	,,	3	,,	b−2, c−1, e+8, k+12, n−2	3·1			
Apr. 3	4748	,,	2	,,	b−4, c−2, e+6, k+10, n−1,	3·2			
,, 8	4753	,,	,,	,,	b−1, =c, e+7, k+12, =n	3·1			
May 2	4777	,,	3	,,	b−5, c−2	3·5			
,, 5	4780	,,	2	,,	b−5, c−1	3·5			
Nov. 8	4967	,,	...	Be.	...	*3·2*			
Dec. 30	5019	,,	...	...	...	*3·2*			
1900.									
Jan. 1	5021	,,	1	,,	=b	3·2			
Feb. 7	5058	,,	2	Ma.	b−3, c−1	3·4			
Mar. 4	5083	,,	1	,,	b−6, c−4, e+5	3·5			
,, 17	5096	,,	3	,,	b−3, c−2, e+7	3·2			
,, 31	5110	,,	2	,,	b−4, c−2, =e	3·5			
Apr. 16	5126	,,	1	Be.	b−1, c−1	3·3			
,, 17	5127	,,	,,	Ma.	b−7, c−4, e+4	3·5			
,, 21	5131	,,	3	,,	b−8, c−4, e−1·5	3·7			
,, 23	5133	N.E. & B.	,,	,,	b−5, c−2, e+5	3·4			
,, 26	5136	N.E.	2	,,	b−4, c−2, e+2·5	3·4			
,, 28	5138	,,	,,	,,	b−4, c−2, e+2	3·4			
May 7	5147	B.	3	,,	b−5, c−3	3·6			
Oct. 26	5319	N.E.	1	Wl.	b−2, e+3	3·3			
,, 27	5320	,,	,,	,,	b−2, e+2	3·4			
,, 28	5321	,,	2	,,	b−2, e+3	3·3			
,, 30	5323	,,	1	,,	b−1, e+2	3·3			
,, 31	5323	,,	2	,,	b−2, e+3	3·3			
Nov. 15	5339	,,	1	Ch.	b−8, c−3	3·7			
,, 18	5342	,,	,,	,,	b−8, c−3	3·7			
,, 22	5346	,,	,,	Wl.	b−2, e+1	3·4			
,, 23	5347	,,	,,	Ch.	b−5	3·7			
,, 25	5349	,,	,,	,,	b−5, c−3	3·6			
,, 27	5351	,,	,,	,,	c−2	3·4			
,, 27	5351	,,	,,	Be.	=b, =c	3·2			
Dec. 10	5364	N.E.	2	Ch.	b−3	3·5			
,, 13	5367	,,	1	,,	b−2	3·4			
,, 13	5367	,,	2	Be.	=b, =c	3·2			
,, 13	5367	,,	,,	Or.	b−2, e+2	3·4			
,, 15	5369	,,	,,	,,	b−2, e+2	3·4			
,, 15	5369	,,	1	Ki.	n−10, k+5	3·9			
,, 15	5369	,,	,,	Be.	=b, =c	3·2			

(2213) η GEMINORUM—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Dec. 15	5369	N.E.	1	Ch.	b-3	3·5			
,, 17	5371	,,	,,	,,	b-4	3·6			
,, 19	5373	,,	,,	,,	b-4	3·6			
,, 19	5373	B.	3	Ki.	b-7, c-9, k+6, n-10	3·9			
,, 19	5373	N.E.	1	Be.	=b, =c	3·2			
,, 19	5373	,,	,,	Wl.	b-2, e+2	3·4			
,, 21	5375	,,	,,	,,	b-2, e+3	3·3			
,, 21	5375	,,	,,	Ch.	b-4	3·6			
,, 24	5378	,,	,,	Be.	=b, =c	3·2			
,, 25	5379	,,	,,	,,	=b, =c	3·2			
,, 25	5379	,,	,,	Ch.	b-5	3·7			
,, 26	5380	,,	2	,,	b-4	3·6			
,, 28	5382	,,	1	,,	b-5	3·7			
1901.									
Jan. 9	5394	,,	,,	,,	b-4	3·6			
,, 14	5399	,,	,,	,,	b-3	3·5			
,, 14	5399	,,	,,	Or.	b-1, e+3	3·3			
,, 14	5399	B.	,,	Ki.	c-6, k+6	3·7			
,, 15	5400	N.E.	,,	Or.	b-2, e+2	3·4			
,, 22	5407	B.	,,	Ki.	b-6, k+6	3·7			
,, 24	5409	N.E.	2	Or.	b-2, e+2	3·4			
,, 24	5409	,,	,,	Ch.	b-3	3·5			
Feb. 5	5421	,,	,,	Ma.	b-8, c-3, e+7·5, k+10	3·4			
,, 11	5427	,,	1	Or.	b-1, e+3	3·3			
,, 11	5427	,,	,,	Ch.	b-3	3·5			
,, 12	5428	,,	,,	,,	b-3	3·5			
,, 13	5429	,,	,,	,,	b-3	3·5			
,, 14	5430	,,	,,	Ma.	b-2, c-1, e+5, k+10	3·2			
,, 15	5431	,,	2	,,	b-3, c-1, e+3, k+10	3·3			
,, 15	5431	,,	1	Ch.	b-2	3·4			
,, 15	5431	,,	2	Or.	b-1, e+3	3·3			
,, 17	5433	,,	,,	Ch.	b-3	3·5			
,, 17	5433	,,	1	Wl.	b-1, e+3	3·3			
,, 20	5436	,,	,,	Ch.	b-3	3·5			
,, 25	5441	,,	3	,,	b-3	3·5			
Mar. 3	5447	,,	2	,,	b-3	3·5			
,, 5	5449	,,	,,	,,	b-3	3·5			
,, 5	5449	,,	1	Be.	=b, =c	3·2			
,, 6	5450	,,	2	Ch.	b-4	3·6			
,, 7	5451	,,	1	Or.	b-1, e+3	3·3			
,, 9	5453	,,	,,	Ch.	b-3	3·5			
,, 10	5454	,,	,,	,,	b-3	3·5			
,, 10	5454	N.E.	3	Or.	b-2, e+2	3·4			
,, 14	5458	,,	2	Ma.	b-4, c-2, e+5, k+8	3·3			
,, 19	5463	,,	1	,,	b-6, c-4, e+6, k+12	3·3			
,, 21	5465	B.	,,	Ki.	c-65, k+9	3·5			
,, 21	5465	N.E.	,,	Ch.	b-4	3·6			

(2213) η GEMINORUM—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Mar. 22	5466	N.E.	1	Ma.	b−3, c−1, e+5, k+15	3·1			
,, 24	5468	,,	,,	Ch.	b−5	3·7			
,, 25	5469	,,	3	,,	b−4	3·6			
,, 26	5470	,,	2	,,	b−4	3·6			
,, 28	5472	,,	,,	,,	b−5	3·7			
Apr. 1	5476	,,	,,	,,	b−4	3·6			
,, 4	5479	,,	3	Or.	b−2	3·4			
,, 5	5480	,,	1	,,	b−1	3·3			
,, 5	5480	,,	2	Ch.	b−4	3·6			
,, 10	5485	,,	1	,,	b−6, c−5, e+4	3·5			
,, 13	5488	,,	,,	Be.	=b, =c	3·2			
,, 14	5489	,,	,,	Ch.	b−5	3·7			
,, 15	5490	,,	,,	Or.	b−2	3·4			
,, 18	5493	,,	,,	,,	b−2	3·4			
Dec. 10	5729	,,	,,	Be.	=b, =c	3·2			
1902.									
Jan. 1	5751	,,	,,	Wl.	b−2, e+2	3·4			
,, 2	5752	,,	,,	,,	b−4, e+2	3·5			
,, 3	5753	,,	,,	,,	b−2, e+2	3·4			
,, 4	5754	,,	,,	Be.	=b, =c	3·2			
,, 4	5754	,,	,,	Ch.	b−3, c−2	3·4	...	...	Yellowish-white.
,, 4	5754	,,	,,	LeB.	a−3, g+4	3·3			
,, 5	5755	,,	,,	Ch.	b−3, c−2	3·4			
,, 5	5755	,,	,,	Wl.	b−2, e+2	3·4			
,, 6	5756	,,	,,	,,	b−2, e+2	3·4			
,, 7	5757	,,	,,	,,	b−1, e+3	3·3			
,, 9	5759	,,	,,	,,	b−1, e+3	3·3			
,, 10	5760	,,	,,	Ch.	b−2, c−2	3·4			
,, 12	5762	,,	,,	,,	b−3, c−3	3·5	...	...	Distinctly ruddy.
,, 14	5764	,,	3	LeB.	b−2	3·4			
,, 15	5765	,,	2	Wl.	b−2, e+3	3·3			
,, 16	5766	,,	,,	,,	b−3, e+2	3·4			
,, 19	5769	,,	3	LeB.	b−3	3·5			
,, 29	5779	,,	1	Ch.	b−3, c−3	3·5			
,, 30	5780	,,	2	,,	b−3, c−3	3·5			
,, 31	5781	,,	1	,,	b−3, c−3	3·5			
,, 31	5781	,,	2	LeB.	b−2	3·4			
Feb. 1	5782	,,	1	Ch.	b−3, c−3	3·5			
,, 8	5789	,,	,,	Wl.	b−3, e+1	3·5			
,, 9	5790	,,	,,	Ch.	b−4, c−3, e+3	3·4			
,, 10	5791	,,	,,	Wl.	b−3, e+1	3·5			
,, 11	5792	,,	,,	,,	b−2, e+2	3·4			
,, 12	5793	,,	2	,,	b−3, e+2	3·4			
,, 27	5808	,,	,,	Ch.	b−4, c−4, =g	3·6			
,, 28	5809	,,	1	,,	b−4, c−3	3·5			
,, 28	5809	,,	,,	LeB.	b−3	3·5			
Mar. 4	5813	,,	,,	,,	b−3, c−3	3·5			
,, 8	5817	,,	2	,,	b−3	3·5			
,, 12	5821	,,	1	,,	b−3	3·5			
,, 20	5829	,,	,,	,,	b−3	3·5			

(2213) η GEMINORUM—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Mar. 25	5834	N.E.	2	LeB.	b−3	3·5			
,, 25	5834	,,	1	Ch.	b−3, c−3	3·5			
,, 29	5838	,,	2	LeB.	b−3	3·5			
Apr. 3	5843	,,	1	Ch.	b−3, c−3	3·5			
,, 6	5846	,,	,,	,,	b−3, c−3	3·5			
,, 16	5856	,,	2	Ma.	b−5, c−2, e+6, k+10	3·3			
,, 18	5858	,,	3	,,	b−8, c−4, e+5	3·5			
,, 18	5858	,,	1	Ch.	b−4, c−4	3·6			
,, 23	5863	,,	,,	,,	b−4, c−4	3·6			
,, 24	5864	,,	,,	,,	b−4, c−4	3·6			
,, 24	5864	,,	,,	LeB.	b−3	3·5			
,, 27	5867	,,	,,	Ch.	b−4, c−4	3·6			
,, 28	5868	,,	,,	,,	b−4, c−4	3·6			
,, 30	5870	,,	,,	,,	b−4, c−4	3·6			
May 2	5872	,,	2	Ma.	b−6, c−2, e+1	3·5			
,, 4	5874	,,	,,	,,	b−6, c−5, k+20, =d	3·3			
Oct. 10	6033	,,	1	Ch.	b−4, c−4	3·6			
,, 21	6044	,,	,,	,,	b−2, c+3	3·1			
Nov. 1	6055	,,	,,	,,	b−4, =c	3·4			
,, 2	6056	B.	2	Pe.	b−3, c+2, k+6	3·3			
,, 3	6057	,,	1	,,	b−2, c−3, k+6	3·5			
,, 4	6058	,,	,,	,,	b−2, c−3, e+3	3·4			
,, 8	6062	N.E.	,,	Ch.	b−5, c−3	3·6			
,, 9	6063	,,	,,	,,	b−5, c−4	3·6			
,, 12	6066	,,	,,	,,	b−4, c−4	3·6			
Dec. 2	6086	,,	,,	,,	b−4, c−4	3·6			
,, 18	6102	,,	,,	,,	b−4, c−4	3·6			
,, 23	6107	,,	,,	Ma.	b−5, c−7, k+10	3·6			
,, 24	6108	,,	2	,,	b−8, c−2, e+2	3·6			
1903.									
Jan. 28	6143	,,	1	,,	b−6, c−1, e+4	3·4			
,, 28	6143	,,	,,	Oa.	b+3	2·9			
,, 29	6144	,,	,,	Ma.	b−3, c−2, e+2	3·4			
Feb. 16	6162	,,	,,	Oa.	b−2	3·4			
,, 17	6163	,,	2	,,	b−3	3·5			
,, 18	6164	,,	1	,,	b−3	3·5			
,, 21	6167	,,	,,	,,	b−3	3·5			
,, 23	6169	,,	,,	,,	b−2·5	3·4			
,, 23	6169	,,	,,	Ma.	b−3, c−1, e+6	3·2			
,, 25	6171	,,	2	Oa.	b−2	3·4			
Mar. 3	6177	,,	,,	,,	b−3	3·5			
,, 3	6177	,,	1	Ma.	b−2, =c, e+7·5	3·1			
,, 16	6190	,,	,,	,,	b−1, =c, e+2	3·3			
,, 16	6190	,,	2	Oa.	b−3	...	3·5		
,, 26	6200	,,	,,	,,	b−2	...	3·4		
Dec. 29	6478	,,	,,	,,	b−3	...	3·5		

(2213) η GEMINORUM—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Jan. 9	6489	N.E.	2	Oa.	b−5	...	3·7		
,, 16	6496	,,	1	Ma.	b−3, c−2, e+2·5	...	3·4		
,, 16	6496	,,	,,	Oa.	b−5	...	3·7		
,, 19	6499	,,	,,	Ma.	b−3, c−2, e+3	...	3·4		
Feb. 13	6524	,,	3	,,	b−4, c−2, e+3	...	3·4		
,, 14	6525	,,	2	,,	b−8, c−2, e+2	...	3·6		
,, 15	6526	,,	1	,,	b−5, c−2, e+2	...	3·5		
Mar. 10	6550	,,	,,	,,	b−4, c−1, e+5	...	3·3		
,, 10	6550	,,	,,	Oa.	b−5	...	3·7		
,, 15	6555	,,	2	,,	b−7	...	3·9		
,, 16	6556	,,	,,	,,	b−5	...	3·7		
,, 21	6561	,,	1	,,	b−5	...	3·7		
Apr. 3	6574	,,	,,	Ma.	b−5, c−2, e+3	...	3·4		
,, 8	6579	,,	,,	Oa.	b−4	...	3·6		
,, 9	6580	,,	2	,,	b−4	...	3·6		
,, 9	6580	,,	1	Ma.	b−6, c−8, e+2	...	3·7		
,, 12	6583	,,	,,	,,	b−5, c−2, e+3	...	3·4		
,, 27	6598	B.	2	Oa.	b−4	...	3·6		
May 2	6603	N.E.	1	Ma.	b−5, c−3, =e	...	3·6		
,, 7	6608	,,	2	Oa.	b−4	...	3·6		
,, 16	6617	B.	,,	,,	b−7	...	3·9		
Dec. 2	6817	,,	1	Fd.	=b, =c	...	3·2		
,, 4	6819	,,	,,	,,	a−3, c−3	...	3·4		
,, 5	6820	N.E.	,,	,,	b−5, c−6, a−4	...	3·6		
,, 5	6820	,,	,,	Ma.	b−5, c−4, e+4	...	3·5		
,, 5	6820	B.	,,	Fd.	a+1, b−2, c−2	...	3·2		
,, 7	6822	,,	,,	,,	a−4, b−3, k+5, c−5	...	3·7		
,, 13	6828	N.E.	,,	,,	b−5, c−10, k+3	...	3·9		
,, 16	6831	,,	2	,,	b−5, c−4, k+2	...	3·7		

(3493) R LEONIS.

NOTE.

Data for mean curve:—Period, 313 d. $M-m$, 144 d. Variation, 5·8 m. to 9·8 m.

Chandler does not give the detail of the "inequality" for this star, as "definitive investigation has not yet been made. Present O—C = −20 d." Hence doubtless our large residuals.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Mar. 13	4727	B.	1	Ma.	...	...	9·1	...	Invisible.
Apr. 3	4748	,,	2	,,	...	...	8·4	...	,,
,, 8	4753	,,	,,	,,	...	...	8·2	...	Suspected 7·5?
,, 30	4775	,,	1	,,		8·0±	7·3	+0·7	Much < k.
May 2	4777	,,	,,	,,	m − 2	7·4	7·2	+ ·2	Much < k.
,, 3	4778	,,	2	,,	k − 2	6·8	7·2	− ·4	
,, 4	4779	,,	,,	,,	h − 8, = k	6·9	7·2	− ·3	
,, 5	4780	,,	,,	,,	h − 10, k − 1	7·1	7·1	0	
,, 6	4781	,,	3	,,	k − 2	6·8	7·1	− ·3	
,, 7	4782	,,	1	,,	k − 3, m + 4	6·9	7·1	·2	
,, 8	4783	,,	2	,,	= k	6·6	7·0	·4	
,, 29	4804	,,	3	,,	f − 3, h + 3	6·1	6·2	− ·1	
,, 30	4805	,,	2	,,	f − 7, h + 5	6·2	6·2	0	Ruddy.
,, 31	4806	,,	,,	,,	f − 7, h + 5	6·2	6·2	0	
June 2	4808	,,	,,	,,	f − 6, h + 3	6·3	6·1	+ ·2	
,, 3	4809	,,	,,	,,	f − 3, h + 3	6·1	6·1	0	*
1900.									
Jan. 24	5044	,,	1	Or.	...	7·0±	9·0	−2·0	Much < h.
Feb. 4	5055	,,	3	,,	h − 3	6·7	8·6	1·9	
,, 6	5057	,,	,,	,,	h − 2	6·6	8·6	2·0	
,, 6	5057	T.28	,,	Ma.	h − 5	6·9	8·6	1·7	Ruddy.
,, 7	5058	B.	2	,,	h − 3	6·7	8·5	1·8	
,, 7	5058	T.38	2	Wl.	h − 1	6·5	8·5	2·0	
,, 16	5067	B.	,,	Or.	f − 4, h + 2	6·2	8·2	2·0	
,, 17	5068	T.76	3	Wl.	f − 4, h + 2	6·2	8·1	1·9	
,, 17	5068	B.	2	Ke.	h − 4·5	6·9	8·1	1·2	
,, 20	5071	B. & T.30	1	Mi.	h + 3	6·1	8·0	1·9	
,, 20	5071	B.	2	Or.	f − 4, h + 2	6·2	8·0	1·8	
,, 20	5071	,,	,,	Ma.	h − 2, = k	6·6	8·0	1·4	
,, 22	5073	,,	1	Or.	f − 4, h + 2	6·2	7·9	1·7	
,, 24	5075	B.	1	Ke.	h + 1	6·3	7·9	1·6	
,, 25	5076	B.	2	Ma.	h − 1	6·5	7·8	1·3	
Mar. 1	5080	,,	1	,,	h + 1	6·3	7·7	1·4	
,, 1	5080	,,	2	Or.	f − 4, h + 2	6·2	7·7	1·5	
,, 4	5083	,,	1	Ma.	h + 1	6·3	7·5	1·2	
,, 5	5084	T.28	3	,,	f − 1·5, h + 4·5	6·0	7·5	1·5	Ruddy.
,, 9	5088	B.	,,	,,	= f	5·8	7·3	1·5	

(3495) R LEONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Mar. 11	5090	B.	3	Ma.	f−2	6·0	7·2	1·2	
,, 12	5091	,,	2	,,	f−1	5·9	7·2	1·3	
,, 15	5094	,,	,,	,,	=f	5·8	7·1	1·3	
,, 16	5095	T.28	,,	,,	=f	5·8	7·1	1·3	
,, 16	5095	B.	2	Ke.	=f	5·8	7·1	1·3	
,, 17	5096	B.	3	Ma.	f+0·5	5·8	7·0	1·2	
,, 17	5096	,,	1	Or.	=f	5·8	7·0	1·2	
,, 19	5098	,,	,,	,,	f+2	5·6	6·9	1·3	Orange red.
,, 19	5098	T.15	2	Ki.	f−2·5, h+5	6·0	6·9	·9	
,, 20	5099	,,	1	,,	f+2, h+7, k+8	5·7	6·9	1·2	
,, 20	5099	F.8	2	Wl.	f−1, h+3	6·0	6·9	·9	
,, 20	5099	B.	1	Mi.	f+4	5·4	6·9	−1·5	
,, 20	5099	...	1	Ke.	d−2·5, f+5	5·5	6·9	−1·4	
,, 20	5099	B.	,,	Or.	f+1	5·7	6·9	1·2	Red.
,, 24	5103	F.8	,,	Wl.	=f	5·8	6·7	·9	
,, 26	5105	B.	,,	Ma.	e+2, f+4	5·4	6·7	1·3	Ruddy.
,, 26	5105	...	,,	Ke.	d+2·5, f+10	5·0	6·7	1·7	Very ruddy.
,, 26	5105	T.108	,,	Kp.	f+3	5·5	6·7	1·2	,, ,,
,, 28	5107	,,	2	,,	f+4	5·4	6·6	1·2	,, ,,
,, 28	5107	T.15	1	Ki.	f+4, h+7, k+8	5·7	6·6	·9	
,, 28	5107	B.	,,	Mi.	f+5	5·3	6·6	1·3	
,, 29	5108	F.8	,,	Wl.	f−2, h+4	6·0	6·6	·6	*
,, 29	5108	...	,,	Ke.	=d	5·5	6·6	1·1	
,, 29	5108	T.15	,,	Ki.	f+5, h+9, k+11	5·5	6·6	1·1	
,, 30	5109	,,	2	,,	f+6, h+10, k+11	5·4	6·5	1·1	
,, 30	5109	B.	,,	Ma.	=d, e+2, f+5	5·4	6·5	1·1	Warm orange.
,, 31	5110	,,	,,	,,	d−3, e+3, f+6	5·4	6·5	1·1	
,, 31	5110	,,	1	Mi.	f+6	5·2	6·5	1·3	Perhaps too high.
,, 31	5110	...	2	Ke.	d+2, f+8·5	5·1	6·5	1·4	
,, 31	5110	T.15	1	Ki.	f+7, h+10	5·3	6·5	1·2	
Apr. 1	5111	B.	2	Ma.	=d, e+4	5·3	6·4	1·1	
,, 1	5111	T.15	1	Ki.	f+8, h+9, k+13	5·3	6·4	1·1	
,, 1	5111	B.	,,	Mi.	f+5	5·3	6·4	1·1	
,, 2	5112	T.15	3	Ki.	f+7·5, h+11	5·2	6·4	1·2	
,, 2	5112	F.8	1	Wl.	f+2	5·6	6·4	·8	
,, 4	5114	T.15	2	Ki.	f+8, h+10, e+4·5	5·2	6·3	1·1	
,, 4	5114	B.	,,	Or.	b−3, d+2	5·2	6·3	1·1	Rich orange-red.
,, 5	5115	,,	,,	,,	b−2, d+2	5·2	6·3	1·1	Ruddy.
,, 5	5115	T.15	,,	Ki.	f+8, h+10	5·2	6·3	1·1	
,, 7	5117	F.8	,,	Wl.	f+3	5·5	6·2	·7	
,, 11	5121	...	3	Ke.	=d	5·5	6·1	·6	
,, 12	5122	...	2	,,	d−1, f+7	5·3	6·1	·8	
,, 13	5123	B.	,,	Ma.	d+3, e+5, f+8	5·1	6·1	1·0	
,, 13	5123	,,	3	Or.	b−3, d+2	5·2	6·1	·9	Red.
,, 15	5125	,,	2	Ma.	d+3, e+5, f+8	5·1	6·0	·9	Ruddy.
,, 15	5125	T.	1	Mi.	f+6	5·2	6·0	·8	
,, 16	5126	B. & T.28	,,	Ma.	d+3, e+7	5·0	6·0	1·0	Clear orange-red.
,, 16	5126	...	2	Ke.	d−1	5·6	6·0	·4	Very ruddy.
,, 17	5127	B.	1	Ma.	=d, e+7·5	5·2	6·0	·8	
,, 17	5127	T.15	,,	Ki.	f+5, h+9·5	5·4	6·0	·6	
,, 17	5127	...	2	Ke.	d−2, f+6	5·4	6·0	·6	
,, 17	5127	F.8	1	Wl.	f+2	5·6	6·0	·4	
,, 18	5128	B.	2	Ma.	=d, e+4	5·3	6·0	·7	
,, 19	5129	,,	,,	Or.	b−6, f+4	5·5	5·9	·4	Red.

(3495) R LEONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Apr. 19	5129	F.8	1	Wl.	f+3	5·5	5·9	·4	
,, 20	5130	,,	,,	,,	f+3	5·5	5·9	·4	
,, 20	5130	B.	,,	Or.	b−4, d+2	5·3	5·9	·6	Yellowish-red.
,, 21	5131	,,	2	Ma.	d+1, e+4	5·3	5·9	·6	
,, 21	5131	F.8	1	Wl.	f+3	5·5	5·9	·4	
,, 22	5132	,,	,,	,,	f+3	5·5	5·9	−·4	
,, 23	5133	B.	2	Ma.	d+3, e+7	5·0	5·9	−·9	
,, 24	5134	,,	,,	Or.	f+3	5·5	5·9	·4	
,, 25	5135	T.15	1	Ki.	f+7·5, h+11	5·2	5·9	·7	
,, 25	5135	B. & T.	,.	Mi.	f+5	5·3	5·9	·6	
,, 26	5136	B.	,,	Ma.	d−1, e+2	5·5	5·8	·3	
,, 26	5136	,,	,,	Or.	f+3	5·5	5·8	−·3	Very red.
,, 27	5137	T.108	,,	Kp.	f−1	5·9	5·8	+·1	
,, 28	5138	B.	2	Ma.	d−3, =e	5·7	5·8	−·1	
,, 28	5138	,,	1	Or.	d+1, f+3	5·4	5·8	·4	Very red.
,, 30	5140	,,	,,	Ke.	d−2, f+2	5·6	5·8	·2	
May 1	5141	F.8	2	Wl.	f+3	5·5	5·8	·3	
,, 2	5142	,,	,,	,,	f+3	5·5	5·8	·3	
,, 2	5142	T.15	,,	Ki.	f+5, h+10	5·4	5·8	·4	
,, 3	5143	,,	,,	,,	f+7, h+10	5·3	5·8	−·5	
,, 3	5143	B.	,,	Ma.	f−1	5·9	5·8	+·1	
,, 3	5143	,,	,,	Or.	=f	5·8	5·8	0	
,, 5	5145	,,	,,	Ma.	f−1	5·9	5·8	+·1	
,, 7	5147	,,	3	,,	f−1·5	6·0	5·8	·2	
,, 7	5147	,,	2	Ke.	f−3, h+3	6·1	5·8	+·3	
,, 7	5147	,,	,,	Wl.	=f	5·8	5·8	0	
,, 8	5148	,,	3	Ma.	f−1·5	6·0	5·8	+·2	
,, 10	5150	T.15	2	Ki.	f+7·5, h+10	5·3	5·9	−·6	Probably overrated.
,, 13	5153	,,	,,	,,	f+7, h+11	5·2	5·9	·7	,, ,,
,, 13	5153	B.	,,	Mi.	f−2	6·0	5·9	+·1	
,, 13	5153	,,	,,	Wl.	f−2, h+4	6·0	5·9	·1	Very ruddy.
,, 14	5154	,,	,,	,,	f−2, h+4	6·0	5·9	·1	,, ,,
,, 14	5154	,,	3	Ma.	f−4, h+4	6·1	5·9	·2	
,, 15	5155	,,	,,	,,	f−3, h+5	6·0	5·9	+·1	
,, 15	5155	T.15	2	Ki.	f+7, h+11	5·2	5·9	−·7	Probably overrated.
,, 15	5155	B.	,,	Ke.	h+2	6·2	5·9	+·3	
,, 15	5155	,,	,,	Or.	f−2, h+4	6·0	5·9	+·1	Very red.
,, 16	5156	,,	,,	Ma.	f−1, h+6	5·9	5·9	0	
,, 16	5156	,,	,,	Ke.	h+0·5	6·4	5·9	+·5	
,, 16	5156	,,	,,	Mi.	f−2, h+3	6·1	5·9	·2	
,, 17	5157	T.28	3	Ma.	f−3, h+4	6·1	5·9	·2	
,, 17	5157	B.	2	Ke.	=h	6·4	5·9	·5	
,, 17	5157	,,	3	Wl.	f−2, h+5	6·0	5·9	·1	
,, 19	5159	,,	2	Ma.	=h	6·4	6·0	+·4	
,, 19	5159	T.15	,,	Ki.	f−2, h+8, k+8	5·8	6·0	−·2	
,, 20	5160	T.30	1	Ch.	f−4, h+3	6·2	6·0	+·2	Very red.
,, 23	5163	T.15	3	Ki.	f−6, h+2	6·3	6·0	·3	
,, 24	5164	,,	2	,,	f−5, h+4·5, k+6	6·1	6·0	·1	
,, 25	5165	B.	,,	Ma.	f−6, h+2	6·3	6·1	·2	
,, 27	5167	,,	1	,,	h+1·5	6·3	6·1	·2	
,, 28	5168	,,	,,	,,	=h	6·4	6·1	·3	
,, 28	5168	T.15	2	Ki.	f−6, h+3, k+4	6·3	6·1	·2	
,, 28	5168	B.	,,	Wl.	=h	6·4	6·1	·3	
,, 29	5169	T.15	1	Ki.	f−6, h+2	6·3	6·1	+·2	

(3495) R LEONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Sept. 24	5287	B.	1	Wl.	...	...	9·5	...	Invisible.
Oct. 18	5311	T.38	2	Wl.	u−2, y+4	9·2	9·8	−·6	Strikingly ruddy.
Dec. 18	5372	B.	...	Ke.	...	...	8·5	...	<8·0.
1901.									
Jan. 14	5399	,,	1	Or.	h−3	6·7	7·4	·7	*
,, 17	5402	B.	...	Ke.	h−5	6·9	7·3	·4	
,, 24	5409	,,	2	,,	h−3·5	6·8	7·0	·2	
,, 24	5409	,,	,,	Or.	=h	6·4	7·0	·6	
,, 25	5410	,,	...	Ke.	h−3	6·7	7·0	·3	
,, 27	5412	,,	2	Ma.	h−2·5	6·7	6·9	·2	
,, 29	5414	,,	,,	Ke.	h−2	6·6	6·8	·2	
Feb. 5	5421	,,	,,	Ma.	f−1·5, h+4·5	6·0	6·5	·5	
,, 11	5427	B. & T.	1	Or.	f−4, h+2	6·2	6·3	·1	Very red.
,, 11	5427	T.30	,,	Ch.	f−3, h+3	6·1	6·3	·2	Red.
,, 12	5428	,,	2	,,	f−3, h+3	6·1	6·3	·2	,,
,, 12	5428	T.28	,,	Ma.	h+5	5·9	6·3	·4	Clear orange-red.
,, 12	5428	B.	...	Ke.	f−2	6·0	6·3	−·3	Red.
,, 13	5429	...	...	Mi.	...	*6·3*	6·3	0	
,, 13	5429	T.30	1	Ch.	f−3, h+3	6·1	6·3	−·2	
,, 14	5430	B.	?	Ma.	h−1·5	6·6	6·2	+·4	
,, 15	5431	,,	3	,,	h−1	6·5	6·2	+·3	
,, 15	5431	,,	2	Or.	f−4, h+2	6·2	6·2	0	
,, 15	5431	,,	1	Wl.	f+2	5·6	6·2	−·6	
,, 15	5431	...	...	Kp.	h+1	6·3	6·2	+·1	
,, 16	5432	,,	...	Ke.	=f	5·8	6·2	−·4	
,, 17	5433	,,	1	Wl.	f+3	5·5	6·1	·6	
,, 19	5435	...	...	Kp.	f−1, h+3	6·0	6·1	·1	
,, 20	5436	T.30	2	Ch.	f−2, h+4	6·0	6·1	−·1	
,, 21	5437	,,	,,	,,	f−3, h+3	6·1	6·0	+·1	
,, 21	5437	B.	...	Ke.	=f	5·8	6·0	−·2	
,, 23	5439	,,	1	Ma.	f−4, h+2	6·2	6·0	+·2	
,, 25	5441	T.	3	Or.	f−4, h+2	6·2	5·9	·3	Red.
,, 25	5441	T.30	2	Ch.	f−3, h+3	6·1	5·9	·2	
Mar. 1	5445	B.	,,	Ke.	=h	6·4	5·9	·5	
,, 5	5449	,,	1	Or.	f−4, h+2	6·2	5·8	·4	Red.
,, 6	5450	,,	3	Ma.	h−5	6·9	5·8	1·1	
,, 6	5450	T.30	2	Ch.	h+1	6·3	5·8	·5	
,, 8	5452	B.	,,	Ke.	=h	6·4	5·8	·6	
,, 8	5452	T.28	1	Ma.	=h	6·4	5·8	·6	Fine red.
,, 9	5453	T.30	,,	Ch.	h+3	6·1	5·8	·3	
,, 10	5454	,,	,,	,,	h+3	6·1	5·8	·3	
,, 10	5454	B.	3	Or.	h+1	6·2	5·8	·4	
,, 12	5456	T.28	,,	Ma.	h−2	6·6	5·8	·8	Ruddy.
,, 12	5456	B.	...	Ke.	h−2	6·6	5·8	·8	
,, 14	5458	,,	2	Ma.	h−5	6·9	5·8	1·1	
,, 16	5460	,,	,,	,,	h−5	6·9	5·8	1·1	*
,, 18	5462	...	...	Ke.	...	*6·8*	5·8	1·0	
,, 19	5463	B.	1	Ma.	h−5	6·9	5·9	1·0	
,, 21	5465	T.30	,,	Ch.	h−3	6·7	5·9	·8	
,, 22	5466	T.28	,,	Ma.	h−6	7·0	5·9	1·1	Ruby.

(3495) R LEONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Mar. 22	5466	...	...	Ke.	...	*6·9*	5·9	+1·0	
,, 23	5467	T.30	1	Ch.	h−5	6·9	5·9	+1·0	
,, 24	5468	,,	,,	,,	h−7	7·1	5·9	1·2	
,, 24	5468	B.	2	Ma.	h−10	7·4	5·9	1·5	
,, 24	5468	,,	3	Or.	h−2	6·6	5·9	·7	
,, 25	5469	T.30	2	Ch.	h−7, k−5	7·1	5·9	1·2	
,, 26	5470	,,	,,	,,	k−6	7·2	5·9	1·3	
,, 26	5470	T.	3	Or.	h−2	6·6	5·9	·7	Fine crimson.
,, 27	5471	T.30	,,	Ch.	k−7, q+7	7·4	6·0	1·4	
,, 28	5472	T.28	2	Ma.	h−5	6·9	6·0	·9	
,, 28	5472	T.	,,	Or.	h−10, q+10	7·3	6·0	1·3	Crimson.
,, 28	5472	...	...	Kp.	h−2, u+8	7·4	6·0	1·4	*
,, 31	5475	T.30	3	Cb.	k−7	7·3	6·0	1·3	
Apr. 1	5476	,,	2	,,	k−7	7·3	6·0	1·3	
,, 1	5476	B.	1	Or.	h−4	6·8	6·0	0·8	
,, 3	5478	T.30	3	Ch.	q+4*	7·8	6·1	1·7	
,, 5	5480	T.	1	Or.	h−14, q+4	7·8	6·1	1·7	*
,, 5	5480	...	...	Ke.	...	7·9	6·1	1·8	
,, 9	5484	T.30	2	Ch.	q+3, t+7	8·0	6·2	1·8	
,, 10	5485	T.30	2	Ch.	q+3, t+7	8·0	6·2	1·8	
,, 10	5485	T.	1	Or.	h−10, q+5	7·6	6·2	1·4	
,, 12	5487	T.30	,,	Ch.	q+2, t+6	8·1	6·3	1·8	
,, 15	5490	T.	,,	Or.	h−10, q+4	7·6	6·4	1·2	Vivid crimson.
,, 18	5493	,,	,,	,,	q−4, t+2	8·6	6·5	2·1	
,, 18	5493	T.30	,,	Ch.	q−3, t+5, y+8	8·6	6·5	2·1	
,, 20	5495	,,	,,	,,	q+2, t+6	8·1	6·5	1·6	
,, 20	5495	T.	,,	Or.	h−10, q+2	7·7	6·5	1·2	Red.
,, 21	5496	,,	,,	,,	q+3	7·9	6·5	1·4	
,, 21	5496	T.30	,,	Ch.	=q, t+3, u+5	8·3	6·5	1·8	
,, 23	5498	,,	,,	,,	q−2, u+4	8·5	6·6	1·9	
,, 29	5504	T.28	3	Ma.	...	*8·0±*	6·8	1·2	Much < h. >u or y, ruddy.
May 6	5511	T.30	1	Ch.	q−3, t+4, u+5	8·5	7·0	1·5	
,, 11	5516	T.28	2	Ma.	u+7	8·3	7·2	1·1	Clear red.
,, 13	5518	T.30	1	Ch.	u+3	8·7	7·2	1·5	
,, 14	5519	,,	,,	,,	t+6, u+4	8·4	7·3	1·1	
,, 14	5519	T.28	2	Ma.	h−20, u+10	8·2	7·3	·9	
,, 15	5520	,,	,,	,,	q+1	8·1	7·3	·8	
,, 16	5521	,,	,,	,,	q+1·5	8·1	7·3	·8	Ruddy.
,, 18	5523	,,	,,	,,	q−3, t+3	8·5	7·4	1·1	
,, 20	5525	,,	3	,,	=t, u+5	8·7	7·5	1·2	
,, 22	5527	,,	2	,,	t+2·5	8·6	7·5	1·1	
,, 25	5530	,,	3	,,	q−3, t+3	8·5	7·6	+ ·9	Ruddy.
Dec. 10	5729	T.95	1	Ch.	f−3, h+3	6·1	6·7	− ·6	Brilliant red.
1902.									
Jan. 4	5754	,,	,,	,,	f+4, h+10	5·4	5·9	·5	Brilliant red.
,, 6	5756	T.30	,,	,,	=f, h+6	5·8	5·9	·1	
,, 6	5756	B.	,,	Oa.	=f	5·8	5·9	− ·1	
,, 15	5765	,,	2	Wl.	f−2, h+5	6·0	5·8	+ ·2	Very ruddy
,, 19	5769	,,	,,	,,	f−3, h+5	6·0	5·8	·2	,, ,,
,, 21	5771	,,	,,	,,	f−2, h+6	5·9	5·8	·1	,, ,,
,, 29	5779	T.30	1	Ch.	h−3	6·7	5·9	+ ·8	

(3495) R LEONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Jan. 30	5780	T.30	2	Ch.	h − 4	6·8	5·9	+ ·9	
,, 31	5781	T.95	1	,,	h − 3	6·7	5·9	·8	Flame red.
Feb. 8	5789	B.	,,	Wl.	k − 2	6·8	6·0	·8	
,, 9	5790	T.95	,,	Ch.	h − 13, u + 13	7·7	6·1	1·6	Not so red.
,, 10	5791	B.	,,	Ma.	h − 10	7·4	6·1	1·3	
,, 10	5791	,,	,,	Wl.	k − 3	6·9	6·1	·8	
,, 11	5792	,,	,,	,,	k − 4	7·0	6·1	·9	
,, 11	5792	T.95	,,	Ch.	h − 4	6·8	6·1	·7	Copper-coloured.
,, 12	5793	B.	2	Wl.	k − 5	7·1	6·2	·9	
,, 27	5808	T.95	1	Ch.	h − 13, u + 13	7·7	6·5	1·2	Reddish copper.
Mar. 13	5822	B.	,,	Ma.	...	...	6·9	...	Just glimpsed.
,, 25	5834	T.95	,,	Ch.	u + 8, y + 10	8·4	7·3	1·1	
,, 28	5837	B.	2	Ma.	...	...	7·4	...	Invisible in Bin.
Apr. 3	5843	T.95	,,	Ch.	q + 2, u + 6, y + 10	8·3	7·7	·6	
,, 13	5853	,,	,,	,,	u + 5, y + 10	8·6	8·1	·5	
,, 16	5856	T.28	3	Ma.	...	...	8·2	...	Doubtful obs. 8·0±
,, 18	5858	,,	,,	,,	u + 1	8·9	8·2	·7	
,, 18	5858	T.95	1	Ch.	u + 4, y + 9	8·7	8·2	·5	Red.
,, 23	5863	,,	,,	,,	u + 4, y + 9	8·7	8·4	·3	Very red.
,, 24	5864	,,	,,	,,	u + 3, y + 8	8·8	8·4	·4	
,, 27	5867	,,	,,	,,	u + 2, y + 4	9·0	8·5	·5	Very crimson.
May 2	5872	T.28	,,	Ma.	u − 4·5, y + 1·5	9·5	8·6	·9	
,, 5	5875	T.95	,,	Ch.	u − 4, y + 3	9·4	8·7	·7	
,, 7	5877	...	...	Co.	...	*9·5*	8·8	·7	
,, 8	5878	,,	,,	Ch.	y − 2, x + 2	9·7	8·8	·9	
,, 8	5878	T.28	3	Ma.	u − 4·5, y + 1·5	9·5	8·8	·7	
,, 10	5880	,,	1	,,	x − 2, y − 3	9·9	8·9	1·0	
,, 13	5883	,,	3	,,	x − 2, y − 3	9·9	8·9	1·0	
,, 24	5894	,,	2	,,	y − 4	10·0	9·2	·8	*
,, 25	5895	T.67	,,	,,	y − 3	9·9	9·2	·7	
,, 26	5896	T.95	,,	Ch.	= y	9·6	9·3	·3	
June	5908	...	...	Co.	...	*10·0*	9·5	+ ·5	
Oct. 16	6039	...	...	,,	...	*6·5*	6·8	− ·3	
,, 16	6039	B.	1	Ma.	h − 5	6·9	6·8	+ ·1	
Dec. 20	6104	...	...	Co.	...	*7·5*	6·1	+ 1·4	
,, 30	6114	B.	1	Oa.	= f	5·8	6·3	− ·5	
,, 31	6115	,,	2	,,	= f	5·8	6·3	− ·5	
1903.									
Jan. 2	6117	T.	3	Co.	...	*8·0*	6·4	+ 1·6	V. doubtful obs.
,, 23	6138	,,	2	,,	u + 7	8·3	7·0	1·3	
,, 28	6143	T.28	1	Ma.	u + 2	8·8	7·2	1·6	
Feb. 1	6147	T.	2	Co.	u + 5	8·5	7·3	1·2	
,, 13	6159	,,	,,	,,	u + 2	8·8	7·8	1·0	
,, 21	6167	,,	,,	,,	u + 2	8·8	8·1	·7	
,, 28	6174	,,	,,	,,	= u	9·0	8·3	·7	
,, 28	6174	T.28	1	Ma.	u − 2, y + 4	9·2	8·3	·9	
Mar. 3	6177	,,	,,	,,	u − 0·5	9·0	8·4	·6	

(3495) R LEONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Mar. 5	6179	T.	1	Co.	u − 3, y + 3	9·3	8·4	·9	
,, 16	6190	,,	2	,,	x − 1	9·8	8·8	1·0	
,, 28	6202	,,	,,	,,	y − 4	10·0	9·1	+ ·9	
Apr. 2	6207	T.	...	Co.	= x	9·7	9·2	+ ·5	
,, 11	6216	,,	...	,,	y − 2	9·8	9·4	·4	
,, 24	6229	,,	1	,,	x − 2, z + 2	9·9	9·6	+ ·3	
May 15	6250	,,	,,	,,	= y	9·6	9·8	− ·2	
,, 21	6256	B.	,,	Ma.	...	...	9·8	...	Invisible.
,, 23	6258	,,	,,	,,	...	...	9·8	...	,,
,, 24	6259	T.	,,	Co.	= u	9·0	9·7	− ·7	
1904.									
Jan. 13	6493	,,	...	,,	u − 3, y + 3	9·3	8·5	+ ·8	
,, 14	6494	B.	1	Or.	...	...	8·5	...	Invisible < 8·5.
,, 19	6499	T.28	,,	Ma.	= u	9·0	8·7	+ ·3	
,, 22	6502	T.	...	Co.	y + 1·5	9·5	8·6	·9	
Feb. 6	6517	,,	...	,,	y − 2	9·7	9·0	·7	
,, 6	6517	T.28	1	Ma.	y − 5	10·1	9·0	1·1	Doubtful.
,, 13	6524	,,	2	,,	x − 2	9·9	9·3	·6	Doubtful obs.
,, 15	6526	,,	,,	,,	x − 1·5	9·8	9·3	+ ·5	
Mar. 10	6550	,,	1	,,	= y	9·6	9·7	− ·1	
,, 10	6550	T.	...	Co.	= y	9·6	9·7	·1	
,, 15	6555	T.40	2	Br.	= u	9·0	9·7	·7	
,, 21	6561	,,	1	,,	u + 1	8·9	9·8	·9	
,, 21	6561	T.	...	Co.	u − 2, y + 4	9·2	9·8	·6	
Apr. 3	6574	T.28	1	Ma.	u + 2	8·8	9·7	·9	
,, 6	6577	T.	...	Co.	u + 5	8·5	9·7	1·2	
,, 9	6580	T.28	1	Ma.	u + 5	8·5	9·6	1·1	Ruddy.
,, 9	6580	T.25	2	Br.	n − 12, u + 3	8·7	9·6	·9	
,, 10	6581	,,	1	,,	= s	8·7	9·6	·9	
,, 15	6586	,,	,,	,,	= 2	8·4	9·5	1·1	
,, 19	6590	,,	,,	,,	n − 6, q + 2	8·0	9·4	1·4	
,, 25	6596	T.	...	Co.	h − 12·5, u + 12·5	7·7	9·3	1·6	
,, 30	6601	,,	2	Br.	m − 0·5, n + 2	7·3	9·2	1·9	Very reddish orange.
May 2	6603	,,	1	,,	= m	7·2	9·1	1·9	
,, 2	6603	,,	...	Co.	...	*8·0*	9·1	1·1	
,, 2	6603	T.28	1	Ma.	= n	7·5	9·1	1·6	
,, 13	6614	T.25	2	Br.	k − 3, m + 2	7·0	8·8	1·8	
,, 15	6616	,,	1	,,	k − 3, m + 3	6·9	8·7	1·8	
,, 18	6619	T.28	,,	Ma.	n + 1·5	7·3	8·6	1·3	Ruddy.
,, 18	6619	T.	...	Co.	...	*7·3*	8·6	1·3	
,, 27	6628	T.25	1	Br.	h − 0·5, k + 2	6·5	8·3	1·8	
June 3	6635	F.	...	Co.	...	*7·0*	8·0	1·0	
,, 3	6635	T.28	1	Ma.	h + 1·5	6·3	8·0	1·7	Ruddy.
,, 3	6635	T.25	,,	Br.	= h	6·4	8·0	1·6	
,, 4	6636	T.28	,,	Ma.	h + 1	6·3	8·0	1·7	Ruddy.
,, 5	6637	,,	,,	,,	h − 1	6·5	8·0	1·5	,,
,, 10	6642	T.25	2	Br.	f − 4·5, h + 1·5	6·3	7·7	1·4	
,, 16	6648	,,	,,	,,	f − 1, h + 5	5·9	7·5	1·6	
,, 21	6653	,,	,,	,,	f + 1·5	5·7	7·3	− 1·6	

(3825) R URSÆ MAJORIS.

NOTE.

Star D = D.M. + 69° 576, estimated 8·33 m.
,, M = ,, + 70° 641, 7·37 m. P.D.M.
,, P = ,, + 69° 574, 7·9 m. not in P.D.M.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Apr. 3	4748	B.	3	Ma.	...	...	12·9	...	Invisible.
,, 8	4753	,,	1	,,	...	...	12·8	...	,,
July 8	4844	,,	2	,,	...	...	7·8	...	,,
,, 14	4850	T.28	,,	,,	5−2	8·4	7·5	+ ·9	
,, 27	4863	,,	,,	,,	5+2	8·0	7·4	·6	
,, 29	4865	,,	,,	,,	5+2	8·0	7·4	·6	
Aug. 2	4869	,,	,,	,,	5+2	8·0	7·4	·6	
,, 10	4877	,,	,,	,,	=5	8·2	7·5	·7	
,, 16	4883	,,	3	,,	=5	8·2	7·7	·5	
,, 23	4890	,,	2	,,	=5	8·2	7·8	·4	
,, 24	4891	,,	,,	,,	5−1	8·3	7·8	·5	
Sept. 2	4900	,,	1	,,	5−3	8·5	8·2	·3	
,, 9	4907	,,	,,	,,	5−5	8·7	8·4	·3	
,, 12	4910	,,	2	,,	5−5	8·7	8·5	0·2	
,, 30	4928	,,	,,	,,	12+3	10·4	9·2	1·2	
Oct. 5	4933	,,	1	,,	7−5, 12+5	10·2	9·5	+ ·7	
,, 31	4959	,,	3	,,	...	...	10·6	...	Invisible.
1900.									
Mar. 16	5095	,,	2	,,	...	...	11·8	...	,,
,, 30	5109	,,	,,	,,	...	...	10·9	...	Probably seen, estimated 10·0 to 10·5.
Apr. 1	5111	T.	1	Mi.	=7	9·8	10·8	−1·0	
,, 15	5125	B.	2	Ma.	...	...	9·5	...	Invisible.
,, 16	5126	T.28	1	,,	5+2	8·0	9·4	1·4	
,, 17	5127	B.	2	,,	=5	8·2	9·2	1·0	
,, 18	5128	T.28	,,	,,	5+4	7·8	9·1	1·3	
,, 19	5129	B.	...	Ke.	5+2, 3−2	7·9	9·1	1·2	
,, 20	5130	,,	...	,,	5+3, 3−2	7·9	9·0	1·1	
,, 21	5131	T.28	2	Ma.	5+4	7·8	8·9	1·1	
,, 26	5136	B.	,,	,,	=3	7·7	8·3	·6	
,, 28	5138	,,	,,	,,	4+1, 3−1	7·8	8·2	·4	
,, 30	5140	,,	...	Ke.	5+2, 3−2	7·9	8·1	− ·2	
May 5	5145	,,	1	,,	5+2·5, 3−1	7·9	7·9	0	
,, 7	5147	,,	,,	,,	3+2·5	7·5	7·8	− ·3	
,, 7	5147	,,	3	Ma.	M+2·5	7·2	7·8	·6	
,, 7	5147	T.30	2	Ch.	2−2	6·1	7·8	1·7	
,, 10	5150	,,	,,	,,	2−4	6·3	7·6	1·3	
,, 15	5155	B.	,,	Ke.	...	...	7·4	...	>3 or 5.
,, 16	5156	,,	1	,,	3+4	7·3	7·4	·1	

(3825) R URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
May 17	5157	B.	2	Ke.	3+2	7·5	7·4	+ ·1	
,, 17	5157	,,	3	Ma.	...	6·3	7·4	−1·1	
,, 19	5159	T.	1	Mi.	3+3	7·4	7·4	0	
,, 23	5163	B.	,,	Ke.	d−5, 3+3·5	7·3	7·3	0	
,, 28	5168	T.30	2	Ch.	2−8	6·7	7·4	−·7	
,, 29	5169	B.	1	Ke.	d−6	7·3	7·4	·1	
June 1	5172	,,	...	,,	d−6·5, 3+4	7·3	7·4	−·1	
,, 25	5196	T^{a}.28	2	Ma.	=5	8·2	7·9	+·3	
,, 26	5197	,,	,,	Ma.	5+2	8·0	7·9	+·1	
July 2	5203	,,	,,	,,	5+3	7·9	8·1	−·2	
,, 29	5230	,,	,,	,,	...	...	9·2	...	Invisible.
Aug. 14	5246	,,	,,	,,	7−3	10·1	9·9	+·2	Glimpsed.
,, 22	5254	,,	1	,,	14+3	11·2	10·2	+1·0	
,, 22	5254	T.30	1	Ch.	...	...	10·2	...	Invisible.
,, 25	5257	T.28	,,	Ma.	14+2	11·3	10·3	+1·0	Very difficult.
,, 30	5262	,,	2	,,	...	...	10·5	...	Invisible.
1901.									
Jan. 14	5399	,,	1	,,	...	...	11·8	...	,,
Feb. 12	5428	,,	2	,,	5−8, 7+8	9·0	10·6	−1·6	<3 or 4.
,, 12	5428	T.30	,,	Ch.	7+5	9·3	10·6	1·3	
,, 13	5429	,,	1	,,	7+4	9·4	10·5	1·1	
,, 14	5430	,,	,,	Ma.	5−4	8·6	9·4	·8	
,, 15	5431	B.	2	,,	...	...	9·3	...	Invisible in Bin.
,, 17	5433	T.30	1	Ch.	5−8, 7+8	9·0	9·1	·1	
,, 20	5436	,,	,,	,,	5−5	8·7	8·8	−·1	
,, 25	5441	,,	3	,,	5−3	8·5	8·4	+·1	
Mar. 8	5452	B. & T.28	1	Ma.	P+2·5	7·7	7·7	0	
,, 9	5453	T.30	,,	Ch.	5+5, 3+1	7·6	7·6	0	
,, 10	5454	,,	,,	,,	5+6, 3+2	7·5	7·6	−·1	
,, 12	5456	T.28	,,	Ma.	P+1	7·8	7·5	+·3	
,, 14	5458	B.	2	,,	D+2·5, 3+2·5, P+2·5	7·7	7·5	·2	
,, 16	5460	T.28	,,	,,	D−2·5, P+2·5	8·1	7·5	·6	
,, 18	5462	B.	1	,,	D+5, 3+5, P+5	7·5	7·4	·1	
,, 19	5463	T.28	,,	,,	D−2·5, P+2·5	8·1	7·4	·7	
,, 21	5465	T.30	,,	Ch.	5+6, 3+3	7·5	7·3	·2	
,, 22	5466	T.28	,,	Ma.	P+2	7·7	7·3	+·4	
,, 23	5467	T.30	,,	Ch.	3+4	7·3	7·3	0	
,, 25	5469	,,	3	,,	5+2, 3−2	7·9	7·4	+·5	
,, 26	5470	,,	2	,,	5+3, =3	7·8	7·4	·4	
,, 27	5471	,,	,,	,,	5+5, 3+2	7·6	7·4	·2	
,, 28	5472	,,	,,	,,	5+3, 3+2	7·7	7·4	·3	
,, 28	5472	T.28	1	Ma.	P−2	8·1	7·4	·7	
,, 31	5475	T.30	3	Ch.	5+4, 3+2	7·6	7·4	·2	
Apr. 1	5476	,,	2	,,	5+4, 3+2	7·6	7·4	·2	
,, 4	5479	,,	3	,,	5+5	7·7	7·4	·3	
,, 5	5480	,,	2	,,	5+4, 3−1	7·8	7·5	·3	
,, 9	5484	,,	,,	,,	5+4, =3	7·7	7·5	·2	
,, 10	5485	,,	1	,,	5+3, 3−2	7·9	7·6	·3	

(3825) R URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Apr. 12	5487	T.30	1	Ch.	5+3, 3−1	7·8	7·6	·2	
,, 18	5493	,,	,,	,,	5−2	8·4	7·7	·7	
,, 19	5494	T.	,,	Or.	5+2, 3−2	8·0	7·7	·3	
,, 20	5495	T.30	,,	Ch.	5−2	8·4	7·8	·6	
,, 30	5505	,,	3	,,	5−5	8·7	8·1	·6	
May 6	5511	,,	1	,,	5−5	8·7	8·3	·4	
,, 8	5513	,,	,,	,,	5−5, 6+3	9·0	8·4	·6	
,, 11	5516	T.28	2	Ma.	7+3	9·5	8·5	1·0	
,, 12	5517	T.30	1	Ch.	6−2, =7	9·9	8·5	1·4	
,, 13	5518	,,	,,	,,	=6, 7+2	9·7	8·6	1·1	
,, 14	5519	T.28	2	Ma.	7+2	9·6	8·6	1·0	
,, 15	5520	,,	,,	,,	7+1	9·7	8·7	1·0	
,, 16	5521	,,	,,	,,	7+2	9·6	8·7	·9	
,, 16	5521	T.30	1	Ch.	=7	9·8	8·7	+1·1	
,, 18	5523	T.28	2	Ma.	7+1	9·7	8·8	+ ·9	
,, 19	5524	T.30	1	Ch.	6−5, 10+3	10·3	8·8	1·5	
,, 20	5525	,,	,,	,,	=6, 10+6	9·9	8·8	1·1	
,, 20	5525	T.28	3	Ma.	=7	9·8	8·8	1·0	
,, 22	5527	,,	2	,,	7+1	9·7	8·9	·8	
,, 24	5529	T.30	1	Ch.	6−2	10·1	9·0	1·1	
,, 25	5530	T.28	3	Ma.	=7	9·8	9·0	·8	
,, 31	5536	T.30	1	Ch.	6−5, 7−4	10·3	9·3	1·0	
June 5	5541	,,	,,	,,	7−5, =10, 12+4	10·3	9·5	·8	
,, 6	5542	,,	,,	,,	7−5, =10, 12+4	10·3	9·5	·8	
,, 10	5546	,,	,,	,,	10−3, 13+2	10·8	9·7	1·1	
,, 16	5552	,,	,,	,,	10−4, 13+3, 14+4	10·9	10·0	·9	
,, 23	5559	T.60	2	,,	10−6, =13, 14+2	11·1	10·3	·8	
,, 26	5562	,,	3	,,	...	...	10·4	...	<10·2.
,, 27	5563	T.160	2	,,	14+2	11·3	10·4	·9	
July 3	5569	T.28	3	Ma.	...	...	10·7	...	Invisible.
,, 7	5573	T.160	2	Ch.	14−2, 18+5	11·6	10·8	·8	
,, 8	5574	T.60	1	,,	14−3, 18+4	11·7	10·9	·8	
,, 15	5581	T.160	,,	,,	14−4, 18+3	11·8	11·2	·6	
,, 15	5581	T.28	2	Ma.	...	...	11·2	...	Invisible.
,, 18	5584	T.160	1	Ch.	14−5, 18+2	11·9	11·2	·7	
,, 22	5588	T.60	,,	,,	=18	12·0	11·4	·6	
Aug. 6	5603	T.90	,,	,,	18−4, 23+6	12·7	11·9	·8	
,, 6	5603	T.28	2	Ma.	...	...	11·9	...	Est. 11·0 ±. Faint point glimpsed.
,, 7	5604	T.	1	Pe.	20−3	12·8	11·9	·9	Very difficult.
,, 8	5605	T.28	2	Ma.	...	...	11·9	...	Invisible.
,, 8	5605	T.90	1	Ch.	18−5, 23+4	12·3	11·9	·4	
,, 8	5605	T.	,,	Pe.	20−3	12·8	11·9	·9	Difficult.
,, 13	5610	T.90	,,	Ch.	18−7, 23+2	12·5	12·1	·4	Minute point.
,, 17	5614	T.28	,,	Ma.	...	...	12·2	...	Glimpsed, doubtful.
,, 18	5615	T.90	2	Ch.	23−4, 29+3	12·9	12·2	·7	Nebulous-looking.
,, 20	5617	,,	1	,,	23−4, 29+3	12·9	12·3	·6	
,, 20	5617	T.28	,,	Ma.	...	...	12·3	...	Invisible.
Sept. 9	5637	T.90	1	Ch.	29−4	13·5	12·7	·8	Just glimpsed.
,, 15	5643	,,	,,	,,	29−4	13·5	12·8	·7	,, ,,

(3825) R URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Oct. 3	5661	T.90	1	Ch.	...	...	12·8	...	Not seen. <13·1.
,, 5	5663	,,	,,	,,	=29	13·1	12·9	·2	About.
,, 18	5676	T.160	2	,,	...	...	12·6	...	Not seen.
Nov. 15	5704	T.90	3	,,	23−6	13·1	11·7	1·4	
,, 16	5705	T.28	2	Ma.	...	...	11·6	...	Invisible.
,, 28	5717	T.60	,,	Ch.	13+2, 14+4	11·0	10·9	+ ·1	
Dec. 8	5727	,,	1	,,	6+3, 7+5	9·3	10·0	− ·7	
,, 18	5737	T.95	,,	,,	5−4, 6+7	8·4	9·0	·6	
,, 18	5737	T.28	2	Ma.	5−2·5	8·4	9·0	·6	
,, 25	5744	T.95	1	Ch.	5+6	7·6	8·3	·7	
1902.									
Jan. 4	5754	,,	,,	,,	=3	7·7	7·8	− ·1	Reddish.
,, 4	5754	T.28	,,	Ma.	5+5, 4−1	7·9	7·8	+ ·1	
,, 4	5754	T.20	,,	LeB.	5+3	7·9	7·8	+ ·1	
,, 5	5755	,,	,,	,,	5+4	7·8	7·7	+ ·1	
,, 5	5755	T.30	,,	Ch.	3−2, 5+4	7·8	7·7	·1	
,, 13	5763	T.20	2	LeB.	5+1	8·1	7·5	·6	
,, 19	5769	,,	3	,,	5+2	8·0	7·3	·7	
,, 29	5779	T.30	2	Ch.	4−4, 5−3	8·4	7·4	1·0	
,, 31	5781	,,	1	,,	3−2, 5+4	7·8	7·4	·4	Quite ruddy.
Feb. 9	5790	T.95	,,	,,	5+2, 8+10	8·5	7·6	·9	,, ,,
,, 11	5792	,,	,,	,,	4−2, 5+3	8·0	7·6	·4	,, ,,
,, 27	5808	,,	2	,,	5−2, 6+3, 7+5	9·1	8·1	1·0	
,, 28	5809	,,	1	,,	5−3, 6+2, 7+3	9·2	8·1	1·1	
Mar. 1	5810	T.	...	Co.	...	8·8	8·1	·7	
,, 25	5834	T.95	1	Ch.	8−3=10, 12+2, 14+8, 18+10	10·6	9·0	1·6	
Apr. 3	5843	,,	3	,,	10−4, 12−3, 14+3	11·0	9·4	1·6	
,, 13	5853	,,	2	,,	14+5, 18+8	11·6	9·9	1·7	
,, 16	5856	T.28	3	Ma.	...	...	10·0	...	Invisible.
,, 18	5858	T.160	2	Ch.	14+4, 18+9	11·1	10·1	1·0	
,, 23	5863	T.95	1	,,	14+3, 18+8	11·2	10·3	·9	
,, 24	5864	T.160	,,	,,	14+2, 18+8	11·3	10·3	1·0	
,, 27	5867	,,	,,	,,	13−4, 14−2, 18+5	11·5	10 4	1·1	
May 5	5875	,,	,,	,,	14−2, 18+5	11·6	10·8	·8	
,, 8	5878	T.95	,,	,,	14−5, 18+2	11·9	10·9	1·0	
,, 25	5895	,,	2	,,	18−6, 23+3	12·4	11·5	·9	
,, 26	5896	,,	,,	,,	18−2, 23+5	12·1	11·5	·6	
,, 27	5897	,,	1	,,	18−5, 23+4	12·3	11·6	+ ·7	
June 29	5930	,,	3	,,	=23	12·5	12·5	0	About.
July 6	5937	,,	2	,,	23−4	12·9	12·6	+ ·3	
Aug. 9	5971	T.28	1	Ma.	...	...	12·8	...	Faint point glimpsed <11·0.
,, 24	5986	T.	...	Co.	...	12·0	12·5	− ·5	
,, 25	5987	T.28	1	Ma.	...	...	12·4	...	Invisible.

(3825) R URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Sept. 7	6000	T.	...	Co.	...	*12·0*	12·0	0	
,, 23	6016	,,	...	,,	...	*11·0*	11·2	− ·2	
,, 25	6018	T.28	1	Ma.	...	...	11·1	...	Invisible.
,, 29	6022	T.	...	Co.	...	*10·0*	10·8	·8	
Oct. 10	6033	T.95	1	Ch.	5−3	8·5	9·8	1·3	Ruddy.
,, 14	6037	,,	,,	,,	4−1, 5+4	8·0	9·4	1·4	
,, 15	6038	T.	...	Co.	...	*8·0*	9 2	1·2	
,, 21	6044	,,	...	,,	...	*8·0*	8·7	·7	
,, 21	6044	T.95	1	Ch.	3−2, =4	7·9	8·7	·8	
,, 21	6044	T.28	,,	Ma.	3+3	7·4	8·7	1·3	Ruddy.
,, 26	6049	,,	,,	,,	3−2, 4+2	7·8	8·3	·5	
Nov. 1	6055	T.95	,,	Ch.	3+4, 4+5	7·4	8·0	·6	
,, 4	6058	T.28	,,	Ma.	3+7	7·0	7·7	− ·7	
,, 7	6061	T.	...	Co.	...	*7·8*	7·6	+ ·2	
,, 9	6063	T.28	1	Ma.	3+7·5	7·0	7·5	− ·5	Ruddy.
,, 10	6064	T.30	,,	Ch.	3+3, 4+4	7·5	7·5	0	
,, 21	6075	T.	...	Co.	..	*8·2*	7·3	+ ·9	
,, 28	6082	,,	...	,,	...	*8·2*	7·4	·8	
,, 28	6082	T.60	1	Ch.	=5	8·2	7·4	+ ·8	
Dec. 2	6086	T.60	1	Ch.	5+3	7·9	7·4	+ 5	
,, 4	6088	T.	...	Co.	...	*8·5*	7·5	1·0	
,, 18	6102	T.28	1	Ma.	5−1·5	8·3	7·7	·6	
,, 20	6104	T.	...	Co.	...	*9·0*	7·8	1·2	
,, 21	6105	T.28	1	Ma.	5−2	8·4	7·8	·6	
,, 24	6108	T.	...	Co.	...	*9·0*	7·9	1·1	
,, 31	6115	,,	...	,,	...	*9·3*	8 2	1·1	
1903.									
Jan. 3	6118	T.28	1	Ma.	5−10, 7+5	9·2	8·3	·9	
,, 23	6138	T.	,,	Co.	=7	9·8	9·0	·8	
,, 28	6143	T.28	,,	Ma.	7−5, 10+6	10·1	9·3	·8	
Feb. 13	6159	T.	,,	Co.	12−4, 14+4	11·1	10·0	1·1	
,, 17	6163	T.28	,,	Ma.	10−5	11·0	10·1	·9	
,, 21	6167	T.	,,	Co.	14+8	11·7	10·3	1·4	
,, 28	6174	,,	,,	,,	14+2	11·3	10·6	+ ·7	
,, 28	6174	T.28	,,	Ma.	...	*10·3*	10·6	− ·3	
Mar. 3	6177	,,	,,	,,	14+1	11·4	10·7	+ ·7	*
,, 5	6179	T.	,,	Co.	14+3	11·2	10·8	·4	
,, 16	6190	,,	,,	,,	23+5	12·0	11·2	·8	
,, 16	6190	T.28	,,	Ma.	...	...	11·2	...	Invisible.
,, 28	6202	T.	,,	Co.	=23	12·5	11·6	·9	
Apr. 2	6207	,,	,,	,,	=23	12·5	11·7	·8	
,, 11	6216	,,	,,	,,	23−1	12·6	12·0	+ ·6	
,, 24	6229	,,	...	,,	...	...	12·4	...	Barely visible<23 13·0±.
May 15	6250	,,	...	,,	23−3	12·8	12·8	0	*
,, 24	6259	,,	...	,,	23−6	13·1	12·8	+ ·3	*
June 21	6287	,,	3	,,	...	...	12·6	...	Invisible.

(3825) R URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O−C.	Remarks.
1903.									
July 23	6319	T.	...	Co.	14+2	11·3	11·3	0	
Aug. 25	6352	,,	...	,,	5−4	8·6	8·4	+ ·2	
,, 26	6353	T.28	1	Ma.	5+4, D−5	8·3	8·3	0	
Sept. 2	6360	T.	...	Co.	5+5	7·7	7·9	− ·2	
,, 5	6363	T.28	1	Ma.	5+4	7·8	7·7	+ ·1	
,, 11	6369	,,	2	,,	...	...	7·5	...	Not seen.
,, 12	6370	T.	...	Co.	5+4	7·8	7·5	·3	
,, 18	6376	,,	...	,,	3−2·5, 5+2·5	7·9	7·3	·6	
,, 25	6383	,,	...	,,	...	8·3	7·4	·9	
Oct. 12	6400	T.28	1	Ma.	5−3	8·5	7·6	·9	
,, 15	6403	T.	...	Co.	5−3	8·5	7·7	·8	
,, 23	6411	T.28	1	Ma.	5−4	8·6	7·9	·7	
,, 25	6413	T.	...	Co.	7+3	9·5	8·0	1·5	
,, 30	6418	T.28	1	Ma.	7+5	9·3	8·1	1·2	
Nov. 6	6425	,,	,,	,,	5−13, 7+1·5	9·0	8 4	·6	
,, 14	6433	T.	...	Co.	12−1	10·8	8·7	2·1	
,, 21	6440	T.28	1	Ma	...	...	9·0	...	>10·5.*
Dec. 11	6460	T.	...	Co.	=14	11·5	9·8	1·7	About.
1904.									
Jan. 10	6490	,,	3	,,	14−7	12·2	11·0	1·2	Doubtful obs.
,, 13	6493	,,	...	,,	18−3, 23+3	12·3	11·1	1·2	
,, 14	6494	T.28	1	Ma.	...	...	11·2	...	Invisible.
Feb. 6	6517	T.	...	Co.	...	...	11·9	...	,, <12·5.
Mar. 10	6550	T.	...	Co.	...	...	12·7	...	Invisible < 12·0.
,, 21	6561	,,	...	,,	...	...	12·8	...	,, < 12·0.
Apr. 6	6577	,,	...	,,	23−3, 29+3	12·8	12·8	0	
May 2	6603	T.28	1	Ma.	...	...	12·2	...	Invisible.
,, 18	6619	,,	,,	,,	10−3	10·8	11·5	− ·7	
,, 18	6619	T.	...	Co.	=12	10·7	11·5	·8	
June 3	6635	,,	...	,,	=5	8·2	10·4	2·2	
,, 3	6635	T.28	1	Ma.	5+1	8·1	10·4	2·3	
,, 5	6637	,,	,,	,,	5+2	8·0	10·2	2·2	
,, 7	6639	,,	,,	,,	=4, 5+3	7·9	10·0	2·1	
,, 22	6654	,,	,,	,,	3+5, 5+7	7·3	8·5	1·2	
,, 28	6660	,,	,,	,,	3−1, 4+1, 5+7	7·7	8·1	·4	
July 3	6665	,,	,,	,,	=3	7·7	7·8	·1	No colour.
,, 5	6667	T.	...	Co.	5+7	7·5	7·7	− ·2	
,, 9	6671	T.28	1	Ma.	=3	7·7	7·5	+ ·2	
,, 12	6674	T.	...	Co.	5+5	7·7	7·5	·2	
,, 15	6677	T.28	1	Ma.	3+2·5	7·5	7·4	·1	
,, 20	6682	,,	2	,,	=3	7·7	7·3	·4	
Aug. 2	6695	,,	1	,,	5+2, D−6	8·5	7·6	·9	
,, 2	6695	T.	...	Co.	=5	8·2	7·6	·6	

(3825) R URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Aug. 8	6701	T.28	1	Ma.	5+2	8·0	7·6	·4	
,, 11	6704	,,	,,	,,	5−3	8·5	7·6	·9	
,, 14	6707	T.	...	Co.	5−3	8·5	7·7	·8	
,, 17	6710	T.28	1	Ma.	5−1	8·3	7·8	·5	
,, 18	6711	,,	2	,,	=5	8·2	7·8	·4	
,, 20	6713	,,	1	,,	5−6	8·8	7·9	·9	
,, 28	6721	,,	,,	,,	7+2	9·6	8·1	1·5	
,, 28	6721	T.	...	Co.	7+2	9·6	8·1	1·5	
Sept. 3	6727	T.28	1	Ma.	5−12, 7+4	8·8	8·3	·5	
,, 15	6739	,,	,,	,,	10+1	10·4	8·8	1·6	
,, 27	6751	,,	2	,,	...	...	9·3	...	Invisible.
Oct. 3	6757	,,	1	,,	10−2	10·7	9·6	1·1	Just held.
,, 3	6757	T.	...	Co.	14+6	10·9	9·6	1·3	
,, 12	6766	T.28	1	Ma.	...	...	9·0	...	Invisible.
,, 29	6783	T.	...	Co.	14−3, 18+3	11·8	10·7	+1·1	
Dec. 5	6820	,,	3	,,	...	...	11·9	...	Invisible.
,, 5	6820	T.28	1	Ma.	...	...	11·9	...	,,

(4511) T URSÆ MAJORIS.

Date.	Julian Date.	Inst.	Class.	Observer	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
July 29	4865	B.	2	Ma.	2+3	7·7	8·0	− ·3	
,, 31	4867	T.28	3	,,	2+3	7·7	8·1	·4	
Aug. 2	4869	,,	2	,,	2+1, 4+3, 6+10	7·9	8·1	− ·2	
,, 9	4876	B.	1	,,	...	*9·0*	8·3	+ ·7	Intrinsic est.*
,, 10	4877	T.28	2	,,	2−6, 4+2, 6+4	8·4	8·3	·1	
,, 16	4883	,,	3	,,	=6	8·8	8·6	+ ·2	
,, 23	4890	,,	2	,,	5+5, 6−3	8·7	8·8	− ·1	
,, 24	4891	,,	,,	,,	5+1, =6	8·8	8·9	·1	
Sept. 2	4900	,,	1	,,	5+1,2−6,4−4,9+8	8·8	9·3	·5	
,, 9	4907	,,	,,	,,	5−5, 9+5	9·3	9·7	·4	
,, 12	4910	,,	2	,,	6−4, 9+3	9·4	9·8	·4	
,, 30	4928	,,	,,	,,	9−4	10·3	10·7	·4	
Oct. 5	4933	,,	1	,,	9−2	10·1	11·0	·9	
,, 31	4959	,,	2	,,	...	...	12·1	...	Invisible.
1900.									
Jan. 29	5049	,,	,,	,,	...	...	10·3	...	,,
Feb. 6	5057	,,	3	,,	6+1	8·7	9·7	1·0	

(4511) T URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Mar. 1	5080	T.28	1	Ma.	c+1	7·2	8·1	·9	
,, 4	5083	,,	,,	,,	=b	7·0	7·9	·9	
,, 5	5084	T.28	3	,,	2+7·5	7·3	7·9	·6	Warm orange.
,, 16	5095	,,	2	,,	2+7·5, 4+7·5	8·2	7·7	+ ·5	
,, 17	5096	B.	,,	,,	...	*8·0*	7·7	+ ·3	Intrinsic est.
,, 26	5105	,,	1	,,	...	*7·4*	7·7	− ·3	,,
,, 30	5109	T.28	2	,,	2+10	7·0	7·8	− ·8	
Apr. 1	5111	B.	,,	,,	...	*8·0*	7·9	+ ·1	About.
,, 16	5126	T.28	1	,,	=2	8·0	8·2	− ·2	
,, 17	5127	B.	,,	,,	2−2, 4+2	8·2	8·2	0	
,, 18	5128	,,	2	,,	2−1, 4+2	8·2	8·2	0	
,, 21	5131	T.28	,,	,,	2−1, 6+3	8·3	8·3	0	
,, 26	5136	,,	,,	,,	4+2, 6−1	8·5	8·5	0	
,, 28	5138	,,	1	,,	2−2, 4−3, 6+1	8·5	8·6	− ·1	
June 26	5197	,,	2	,,	...	...	11·5	...	Invisible.
Sept. 29	5292	,,	1	,,	...	...	11·3	...	,,
Oct. 18	5311	,,	2	,,	9+2	9·7	9·8	·1	
,, 26	5319	B.	,,	Ke.	...	...	9·2	...	Faint.
Nov. 9	5333	,,	1	,,	b−5·5, 2+3·5	7·6	8·1	− ·5	
,, 9	5333	,,	,,	Ma.	2−2, 4+2	8·2	8·1	+ ·1	
,, 12	5336	,,	2	Ke.	2+4	7·6	8·0	− ·4	
,, 13	5337	,,	1	,,	b−5, 2+5	7·5	8·0	·5	
,, 17	5341	T.28	,,	Ma	2+5	7·5	7·8	·3	
,, 22	5346	T.	2	Ke.	b−5, 2+5	7·5	7·7	− ·2	About.
,, 26	5350	B.	,,	,,	2+3	7·7	7·7	0	
Dec. 13	5367	,,	1	,,	2−4	8·4	7·8	+ ·6	
,, 19	5373	T.28	,,	Ma.	2+2	7·8	7·9	− ·1	
1901.									
Jan. 7	5392	,,	,,	,,	6−1·5	9·0	8·5	+ ·5	
,, 14	5399	,,	,,	,,	5+6·5, 6−2	8·6	8·8	− ·2	
Feb. 12	5428	,,	2	,,	=11	10·3	10·2	+ ·1	
,, 12	5428	T.30	,,	Ch.	...	...	10·2	...	Invisible.
,, 14	5430	T.28	1	Ma.	=14	10·4	10·3	+ ·1	
Mar. 8	5452	,,	,,	,,	...	...	11·5	...	Invisible < 13 or 14.
,, 9	5453	T.30	,,	Ch.	6−3	9·1	11·5	−2·4	
May 19	5524	,,	,,	,,	5−3, =8	9·2	12·3	3·1	
,, 20	5525	,,	,,	,,	=5, 7+3	8·8	12·3	3·5	
,, 24	5529	,,	,,	,,	5+3, 7+5	8·6	12·2	3·6	
June 6	5542	,,	,,	,,	5+4, 7+5	8·5	11·6	3·1	
,, 10	5546	,,	,,	,,	3−6, 4−3, 5+2	8·7	11·4	2·7	
,, 16	5552	,,	,,	,,	=5	8·8	10·9	2·1	
,, 23	5559	,,	,,	,,	3−4, =5	8·7	10·4	1·7	
,, 27	5563	,,	2	,,	5−2	9·0	10·1	−1·1	
July 3	5569	,,	3	Ma.	...	...	9·6	...	Invisible.

(4511) T URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
July 7	5573	T.30	2	Ch.	9−2, 13+3	10·3	9·2	+1·1	
,, 8	5574	,,	1	,,	9−2	10·1	9·2	·9	
,, 15	5581	,,	,,	,,	5−2, =7	9·1	8·6	·5	
,, 15	5581	T.28	2	Ma.	=5	8·8	8·6	·2	
,, 18	5584	T.30	1	Ch.	7−2, 9+4	9·4	8·4	1·0	
,, 22	5588	,,	,,	,,	5+4, 6+5, 7+6	8·4	8·1	·3	
,, 27	5593	,,	2	,,	3+4, 5+6	8·0	7·9	+ ·1	
,, 28	5594	,,	,,	,,	3+6, 5+8	7·8	7·9	− ·1	
Aug. 6	5603	,,	1	,,	=4	8·3	7·7	+ ·6	
,, 6	5603	T.28	2	Ma.	4+1	8·2	7·7	·5	Distinctly < 2.
,, 6	5603	B.	1	Pe.	2−1	8·1	7·7	·4	
,, 7	5604	,,	,,	,,	4+1, 2−2	8·2	7·7	·5	
,, 8	5605	F.	,,	,,	2−3, 4−1	8·4	7·7	·7	
,, 8	5605	T 28	2	Ma.	=4	8·3	7·7	·6	About.
,, 12	5609	B.	2	Pe.	...	...	7·7	...	Not seen.
,, 13	5610	T.30	1	Ch.	4−2	8·5	7·7	·8	
,, 14	5611	F.	1	Pe.	2−7, 4−4	8·7	7·7	1·0	
,, 15	5612	,,	,,	,,	2−7, 4−4	8·7	7·7	1·0	
,, 17	5614	T.28	,,	Ma.	4+1	8·2	7·7	·5	
,, 18	5615	T.30	,,	Ch.	3−3, 4−2	8·5	7·7	·8	
,, 20	5617	F.	,,	Pe.	2−6, 4−3	8·6	7·8	·8	
,, 20	5617	T.28	,,	Ma.	2−2, 4+2	8·2	7·8	·4	
,, 22	5619	F.	,,	Pe.	2−6	8·6	7·8	·8	
,, 23	5620	T.28	3	Ma.	4+1·5	8·2	7·8	·4	
Sept. 3	5631	,,	1	,,	2−3	8·3	8·0	·3	
,, 5	5633	T.	,,	Pe.	4−2, 6+3	8·5	8·1	·4	
,, 9	5637	T.30	,,	Ch.	4−2, 5+3, 6+4	8·4	8·2	·2	
,, 13	5641	T.	,,	Pe.	4−2, 6+3	8·5	8·3	·2	
,, 18	5646	,,	,,	,,	4−4, 5+1	8·7	8·5	+ ·2	
Oct. 2	5660	T.28	2	Ma.	(15+6)−1, 5+1	8·7	9·0	− ·3	
,, 5	5663	T.30	1	Ch.	5+2, =6, 7+4	8·7	9·2	·5	
,, 18	5676	T.60	,,	,,	7−3·5, 9+3·5	9·5	9·8	·3	
,, 18	5676	T.28	2	Ma.	5−5, 9+5	9·2	9·8	·6	
,, 31	5689	T.60	,,	Ch.	8−4, 9−3, =13	10·2	10·5	− ·3	
Nov. 16	5705	T.28	3	Ma.	...	...	11·3	...	Invisible.
Dec. 8	5727	T.160	2	Ch.	21−3	12·7	12·2	+ ·5	
,, 18	5737	T.95	2	Ch.	27+5	12·3	12·4	− ·1	
1902.									
Jan. 4	5754	T.160	,,	,,	21−5, 27+3	12·7	12·6	+ ·1	
,, 4	5754	T.28	,,	Ma.	...	...	12·6	...	Invisible.
,, 6	5756	T.160	1	Ch.	20−6, 21−4, 27+5	12·7	12·6	·1	
,, 31	5781	,,	3	,,	20−8	13·1	12·3	·8	
Feb. 9	5790	,,	1	,,	21−6, 29+4	12·8	12·0	·8	
,, 11	5792	,,	,,	,,	21−2, 20−3	12·6	11·9	7	
,, 27	5808	T.95	,,	,,	20+3, 21+5	11·9	10·9	1·0	
,, 28	5809	,,	,,	,,	14−8, 20+4, 21+6	11·6	10·8	+ ·8	
Mar. 25	5834	,,	3	,,	4−2, =5	8·7	8·8	− ·1	

(4511) T URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Apr. 3	5843	T.95	2	Ch.	5+3, 6+4	8·5	8·2	+ ·3	
,, 13	5853	,,	,,	,,	2+2, 4+4	7·9	7·8	+ ·1	
,, 16	5856	T.23	3	Ma.	2+6	7·4	7·7	− ·3	Doubtful obs.
,, 18	5858	,,	2	,,	2+5	7·5	7·7	− ·2	Warm hue.
,, 18	5858	T.95	,,	Ch.	2+3, 4+4	7·8	7·7	+ ·1	
,, 23	5863	,,	,,	,,	2+6, 4+8	7·5	7·7	− ·2	
May 4	5874	B.	2	Ma.	A+3·5	6·9	7·8	·9	A corresponds to star a in H.C.O. list of comparison stars for S Ursæ Majoris.
,, 5	5875	T.95	,,	Ch.	2+8, 4+10	7·3	7·8	·5	
,, 7	5877	B.	1	Ma.	=c	7·3	7·8	·5	
,, 8	5878	,,	2	,,	A−2, b+1	6·9	7·8	·9	
,, 10	5880	,,	1	,,	=b	7·0	7·8	·8	
,, 12	5882	T.95	3	Ch.	2+10	7·0	7·9	·9	
,, 13	5883	B.	2	Ma.	A−2·5, b+0·5	6·9	7·9	1·0	
,, 24	5894	,,	3	,,	b−1	7·1	8·2	1·1	
,, 25	5895	T.30	1	Ch.	2+10, 4+12	7·1	8·2	1·1	
,, 26	5896	,,	2	,,	2+8, 4+11	7·2	8·2	1·0	
,, 26	5896	B.	,,	Ma.	c−2	7·5	8·2	·7	
June 4	5905	T.28	,,	,,	2+6·5	7·4	8·6	1·2	
,, 7	5908	T.	...	Co.	...	*8·3*	8·7	·4	
,, 24	5925	T.28	2	Ma.	4−2, 11+3	9·3	9·4	·1	
,, 28	5929	T.	...	Co.	...	*8·5*	9·6	1·1	
July 3	5934	T.28	2	Ma.	9+5, 5−5	9·3	9·9	·6	
,, 6	5937	T.95	1	Ch.	4−4, 5+2, 7+6	8·6	10·0	1·4	
,, 7	5938	T.28	2	Ma.	5−2·5, 9+7·5	9·1	10·1	1·0	
,, 27	5958	,,	,,	,,	9−5, 11+5	10·1	11·1	1·0	
Aug. 1.	5963	,,	1	,,	11−3, 17+7	10·6	11·4	·8	
,, 9	5971	,,	3	,,	...	...	11·7	...	Invisible.
,, 24	5986	T.	...	Co.	...	*11·8*	12·6	·8	
Sept. 7	6000	,,	...	,,	...	*12·0*	12·6	·6	
,, 23	6016	,,	...	,,	...	*12·0*	12·6	·6	
,, 29	6022	,,	...	,,	...	*12·0*	12·6	·6	
Oct. 10	6033	T.95	1	Ch.	...	...	12·4	...	<12·3.
,, 14	6037	,,	,,	,,	...	...	12·3	...	<10·4.
,, 21	6044	,,	,,	,,	...	...	12·1	...	<10·8.
,, 21	6044	T.	...	Co.	...	*12·0*	12·1	− ·1	
Nov. 7	6061	,,	...	,,	...	*12·0*	11·2	+·8	
,, 20	6074	,,	...	,,	...	*11·5*	10·2	1·3	
,, 28	6082	,,	...	,,	...	*11·8*	9·6	+2·2	
Dec. 4	6088	T.	...	Co.	...	*10·5*	9·0	+1·5	
,, 20	6104	,,	...	,,	...	*9·3*	8·0	1·3	
,, 21	6105	T.28	1	Ma.	2−1, 4+2	8·1	8·0	·1	
1903.									
Jan. 2	6117	T.	...	Co.	...	*8·0*	7·7	+ ·3	
,, 3	6118	T.28	1	Ma.	2+4	7·6	7·7	− ·1	
,, 23	6138	T.	,,	Co.	4+1	8·2	7·8	+ ·4	
,, 28	6143	T.28	,,	Ma.	=2	8·0	8·0	0	

(4511) T URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Feb. 1	6147	T.	2	Co.	4−2, 5+2	8·6	8·1	+ ·5	
,, 13	6159	,,	1	,,	=4	8·3	8·4	− ·1	
,, 17	6163	T.28	,,	Ma.	4−1·5, (6+15)+3	8·4	8·6	− ·2	
,, 21	6167	T.	,,	Co.	5+0·5	8·7	8·7	0	
,, 28	6174	T.28	,,	Ma.	(6+15)−2, 5+2·5	8·7	9·0	− ·3	
,, 28	6174	T.	,,	Co.	5+0·5	8·7	9·0	·3	
Mar. 3	6177	T.28	,,	Ma.	4−3, 5+1·5	8·6	9·1	·5	
,, 5	6179	T.	,,	Co.	=5	8·8	9·3	·5	
,, 16	6190	,,	,,	,,	5−5, 9+5	9·3	9·9	·6	
,, 16	6190	T.28	,,	Ma.	5−2	9·0	9·9	·9	
,, 28	6202	T.	,,	Co.	9+1	9·8	10·4	·6	
Apr. 2	6207	,,	,,	,,	=9	9·9	10·7	·8	
,, 13	6218	,,	,,	,,	14−2	10·6	11·3	− ·7	
,, 24	6229	,,	...	,,	20+4	11·9	11·8	+ ·1	
May 15	6250	,,	...	,,	28−4	13·3	12·4	·9	
,, 24	6259	,,	...	,,	28−7	13·6	12·6	1·0	Doubtful.
June 21	6287	,,	...	,,	...	...	12·5	...	Invisible < 12·0.
July 23	6319	,,	...	,,	=20	12·3	11·2	1·1	Very doubtful.
Aug. 25	6352	,,	...	,,	5−5, 9+5	9·1	8·5	·6	
Sept. 2	6360	,,	...	,,	5+1	8·7	8·1	·6	
,, 12	6370	,,	...	,,	2−2, 4+2	8·2	7·7	·5	
,, 18	6376	,,	...	,,	2−2, 4+2	8·2	7·7	·5	
,, 25	6383	,,	...	,,	2−2, 4+2	8·2	7·7	·5	
Oct. 12	6400	T.28	2	Ma.	2−2, 4+2	8·2	7·9	·3	
,, 15	6403	T.	...	Co.	2−2, 4+2	8·2	8·0	+ ·2	
,, 25	6413	,,	...	,,	4+0·5	8·3	8·3	0	
,, 30	6418	T.28	1	Ma.	=4	8·3	8·5	− ·2	
Nov. 6	6425	,,	,,	,,	2−4, 5+4	8·3	8·8	·5	
,, 15	6434	T.	...	Co.	5+1	8·7	9·2	·5	
,, 21	6440	T.28	1	Ma.	=(15+6)	8·7	9·5	·8	
Dec. 11	6460	T.	...	Co.	9+2	9·7	10·5	·8	About.
1904.									
Jan. 10	6490	,,	2	,,	...	...	11·9	...	Invisible.
,, 13	6493	,,	...	,,	20+5	11·8	12·1	− ·3	
,, 14	6494	T.28	2	Ma.	...	...	12·1	...	Invisible.
Feb. 6	6517	T.	...	Co.	28−4	13·3	12·6	+ ·7	
Mar. 10	6550	,,	2	,,	...	...	12·4	...	Invisible.
,, 21	6561	,,	...	,,	...	...	12·0	...	Invisible < 12·9.
Apr. 6	6577	,,	...	,,	=20	12·3	11·1	1·2	
,, 9	6580	T.28	1	Ma.	...	...	10·8	...	Invisible.
May 18	6619	,,	,,	,,	2−2, 4+1	8·2	8·0	+ ·2	

(4511) T URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
May 18	6619	T.	...	Co.	=2	8·0	8·0	0	
June 3	6635	,,	...	,,	=2	8·0	7·7	+ ·3	
,, 3	6635	T.28	1	Ma.	2+6	7·4	7·7	− ·3	
,, 5	6637	,,	,,	,,	2+3 =3	8·0	7·7	+ ·3	
,, 7	6639	,,	,,	,,	2+1	7·9	7·7	+ ·2	
,, 22	6654	,,	,,	,,	2+2	7·8	7·9	− ·1	
,, 28	6660	,,	,,	,,	2−1	8·1	8·0	+ ·1	
July 3	6665	,,	,,	,,	2−1, 4+2	8·1	8·1	0	
,, 5	6667	T.	...	Co.	4+0·5	8·3	8·2	+ ·1	
,, 9	6671	T.28	1	Ma.	2−1	8·1	8·3	− ·2	
,, 12	6674	T.	...	Co.	4+0·5	8·3	8·4	·1	
,, 15	6677	T.28	1	Ma.	2−3, 4+1	8·3	8·5	·2	
,, 20	6682	,,	2	,,	4−2, 5+2	8·6	8·7	·1	
Aug. 2	6695	,,	1	,,	5−2	9·0	9·3	·3	
,, 2	6695	T.	...	Co.	6−2	9·0	9·3	·3	
,, 8	6701	T.28	1	Ma.	5−5, 9+5	9·3	9·6	·3	
,, 11	6704	,,	,,	,,	5−5, 9+5	9·3	9·8	·5	
,, 11	6704	T.	...	Wm.	6−5, 7+5	9·0	9·8	·8	
,, 14	6707	,,	...	Co.	9+2	9·8	9·9	·1	
,, 17	6710	T.28	1	Ma.	9+1	9·8	10·1	·3	
,, 18	6711	,,	2	,,	9+1	9·8	10·1	·3	
,, 28	6721	,,	1	,,	9−1	10·0	10·6	·6	
,, 28	6721	T.	2	Co.	9−4.5, 13+4.5	10·3	10·6	·3	
,, 29	6722	,,	...	Wm.	9−3, 14+3	10·1	10·7	·6	
Sep. 3	6727	T 28	1	Ma.	=11	10·3	11·0	·7	
,, 4	6728	T.	...	Wm.	=14	10·4	11·0	− ·6	
,, 15	6739	T.28	1	Ma.	...	...	11·6	...	Invisible.
,, 29	6753	T.	...	Wm.	...	...	12·1	...	,,
Oct. 13	6757	T.	2	Co.	...	...	12·2	...	,, <12·3.
,, 29	6783	,,	,,	,,	...	...	12·6	...	,, <12·3.
Dec. 5	6820	,,	,,	,,	...	...	11·9	...	,,

(4557) S URSÆ MAJORIS.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
July 31	4867	T.28	3	Ma.	6+3	8·2	8·2	0	
Aug. 2	4869	,,	2	,,	6+3, 8+6	8·2	8·2	0	
,, 9	4876	B.	1	,,	...	...	8·4	...	Invisible.
,, 10	4877	T.28	,,	,,	6−2, 8+2	8·7	8·5	+ ·2	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Aug. 16	4883	T. 28	3	Ma.	=8	8·8	8·7	·1	
,, 23	4890	,,	2	,,	8 – 2·5	9·1	8·9	·2	
,, 24	4891	,,	,,	,,	8 – 4	9·2	9·0	·2	
Sept. 2	4900	,,	1	,,	14 – 2	10·5	9·3	1·2	*
,, 9	4907	,,	,,	,,	14 – 3, 19 + 3	10·6	9·7	·9	
,, 12	4910	,,	2	,,	=19	10·9	9·8	+ 1·1	
,, 30	4928	,,	,,	,,	...	...	10·7	...	Invisible.
Oct. 5	4933	,,	1	,,	...	...	10·9	...	,,
,, 31	4959	,,	2	,,	...	...	11·5	...	,,
1900.									
Jan. 25	5045	B.	1	,,	...	...	8·1	...	Glimpsed 8·5±.
,, 29	5049	T. 28	2	,,	5 – 6, 6 + 6	7·9	8·0	– ·1	
Feb. 6	5057	,,	3	,,	5 + 1	7·2	7·9	·7	
,, 17	5068	B.	...	Ke.	1 – 10	7·7	7·8	·1	
,, 20	5071	,,	1	Ma.	2 – 2, 5 + 2	7·2	7·9	·7	
,, 22	5073	,,	2	Or.	...	...	7·9	...	Faint.
,, 24	5075	,,	...	Ke.	1 – 10	7·7	7·9	·2	About.
Mar. 1	5080	,,	2	Or.	5 – 3	7·6	7·9	– ·3	About.
,, 4	5083	,,	,,	,,	...	8·0	8·0	0	
,, 5	5084	T. 28	2	,,	5 – 7, 6 + 3	8·1	8·0	+ ·1	
,, 13	5092	T. 38	,,	Wl.	3 – 8, 6 + 2	8·3	8·2	+ ·1	
,, 14	5093	,,	,,	,,	3 – 7, 6 + 3	8·2	8·3	– ·1	
,, 15	5094	,,	3	,,	3 – 7, 6 + 3	8·2	8·3	·1	
,, 16	5095	T. 28	2	Ma.	5 – 4, 6 + 2	8·0	8·3	– ·3	
,, 17	5096	B.	1	Or.	...	...	8·3	...	Invisible.
,, 19	5098	,,	,,	,,	...	...	8·4	...	,,
,, 20	5099	,,	,,	,,	...	...	8·5	...	Just glimpsed 8.5±.
,, 20	5099	,,	...	Ke.	...	...	8·5	...	Invisible.
,, 26	5105	,,	1	Ma.	...	...	8·6	...	,,
,, 30	5109	T. 28	2	,,	8 – 2·5	9·1	8·8	+ ·3	
,, 31	5110	B.	,,	,,	...	...	8·8	...	Invisible.
,, 31	5110	T.	1	Mi.	8 – 2	9·0	8·8	·2	
Apr. 1	5111	,,	,,	,,	=h	9·2	8·9	·3	
,, 4	5114	,,	...	Ke.	...	...	8·9	...	Invisible < 8·5±.
,, 16	5126	T. 28	1	Ma.	=14	10·3	9·5	·8	
,, 18	5128	,,	2	,,	14 – 1	10·4	9·6	·8	
,, 21	5131	,,	,,	,,	14 – 3, 19 + 3	10·6	9·7	·9	
,, 26	5136	,,	,,	,,	16 – 1, =19	10·8	10·0	·8	
,, 26	5136	B.	1	Or.	...	...	10·0	..	Invisible.
,, 28	5138	T. 28	2	Ma.	16 – 1, 19 + 1	10·8	10·1	+ ·7	
June 26	5197	,,	,,	,,	...	...	11·1	...	Invisible.
July 2	5203	,,	3	,,	...	...	10·8	...	Just suspected?
Aug. 14	5246	,,	2	,,	8 + 2	8·6	8·7	– ·1	
,, 22	5254	,,	1	,,	=8	8·8	8·4	+ ·4	
,, 25	5257	,,	1	,,	6 – 2, 8 + 2	8·7	8·3	+ ·4	
,, 30	5262	,,	2	,,	8 + 1	8·7	8 2	·5	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Sept. 12	5275	T.28	3	Ma.	6+0·5	8·5	8·0	·5	
,, 15	5278	,,	2	,,	6+2·5	8·3	7·9	·4	
,, 29	5292	,,	1	,,	5−6, 6+6	7·9	7·8	+ ·1	
Oct. 18	5311	,,	,,	,,	5−3	7·6	8·2	− ·6	
,, 21	5314	B.	2	,,	...	...	8·2	...	Suspected 8·0±.
Nov. 15	5339	,,	1	,,	...	...	9·0	...	Invisible.
,, 17	5341	T.28	,,	,,	=8	8·8	9·1	·3	
Dec. 19	5373	,,	,,	,,	...	...	10·6	...	Invisible.
1901.									
Feb. 12	5428	,,	2	,,	...	...	10·7	...	,,
,, 12	5428	T.30	,,	Ch.	...	...	10·7	...	,,
,, 14	5430	T.28	1	Ma.	13−2	10·3	10·6	·3	
Mar. 8	5452	,,	,,	,,	=8	8·8	9·4	·6	
,, 9	5453	T.30	,,	Ch.	8−3	9·1	9·3	·2	
,, 10	5454	,,	,,	,,	8−3	9·1	9·3	·2	
,, 12	5456	T.28	,,	Ma.	8−1	8·9	9·2	·3	
,, 14	5458	B.	2	,,	...	...	9·1	...	
,, 16	5460	T.28	,,	,,	6−2, 8+2	8·7	9·0	− ·3	Invisible.
,, 21	5465	T.30	1	Ch.	8−3	9·1	8·8	+ ·3	
,, 22	5466	T.28	,,	Ma.	6−2	8·7	8·8	− ·1	
,, 23	5467	T.30	,,	Ch.	=6	8·5	8·7	− ·2	
,, 25	5469	,,	3	,,	=8	8·8	8·6	+ ·2	
,, 28	5472	,,	2	,,	8+2	8·6	8·5	·1	
,, 28	5472	T.28	,,	Ma.	6−2, 8+2	8·7	8·5	·2	
Apr. 1	5476	T.30	,,	Ch.	8+3	8·5	8·4	·1	
,, 5	5480	,,	,,	,,	8+3	8·5	8·3	·2	
,, 9	5484	,,	,,	,,	6−3, 8+4	8·8	8·2	·6	
,, 10	5485	,,	1	,,	6−3, 8+3	8·8	8·2	·6	
,, 12	5487	,,	,,	,,	6−2, 8+3	8·6	8·2	·4	
,, 18	5493	,,	,,	,,	6−2, 8+3	8·6	8·0	·6	
,, 19	5494	T.	,,	Or.	6+1, 8+4	8·4	8·0	·4	
,, 20	5495	T.30	,,	Ch.	6−2, 8+3	8·6	8·0	·6	
,, 21	5496	,,	,,	,,	6−1, 8+3	8·6	8·0	·6	
,, 30	5505	,,	2	,,	6+3	8·2	7·9	·3	
May 6	5511	,,	1	,,	6+5, 8+8	8·0	7·9	+ ·1	
,, 8	5513	,,	,,	,,	2−7·5, 6+7·5	7·8	7·9	− ·1	
,, 11	5516	B.	2	Ma.	...	...	7·8	...	Glimpsed much < b or c.
,, 12	5517	T.30	1	Ch.	5−4, 6+8	7·7	7·8	− ·1	
,, 13	5518	,,	,,	,,	5−4, 6+3	8·0	7·8	+ ·2	
,, 14	5519	,,	,,	,,	5−4, 6+4	7·9	7·9	0	
,, 14	5519	B.	2	Ma.	...	...	7·9	...	Glimpsed 8·0±.
,, 15	5520	,,	,,	,,	...	...	7·9	...	,,
,, 16	5521	,,	,,	,,	...	...	7·9	...	Suspected.
,, 16	5521	T.30	1	Ch.	5−3, 6+3	7·9	7·9	0	
,, 18	5523	B.	2	Ma.	...	...	7·9	...	Suspected.
,, 19	5524	T.30	1	Ch.	5−4, 6+3	8·0	7·9	+ ·1	
,, 20	5525	,,	,,	,,	6+4, 8+6	8·2	7·9	+ ·3	
,, 20	5525	T.28	3	Ma.	5−6, 6+6	7·9	7·9	0	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
May 24	5529	T.30	1	Ch.	6+3, 8+6	8·2	8·0	+ ·2	
,, 25	5530	T.28	3	Ma.	2−9, 6+6	7·9	8·0	− ·1	Reddish.
June 4	5540	T.30	1	Ch.	5−4, 6+3, 8+7	8·0	8·2	·2	
,, 6	5542	,,	,,	,,	6+4, 8+7	8·1	8·3	·2	
,, 10	5546	,,	,,	,,	6+3, 8+6	8·2	8·4	·2	
,, 16	5552	,,	,,	,,	6+2, 8+5	8·3	8·6	·3	
,, 23	5559	,,	,,	,,	=6, 8+3	8·5	8·9	·4	
,, 26	5562	,,	2	,,	6−4, 8−1	8·9	9·0	·1	
,, 27	5563	,,	,,	,,	6−2, 8+1	8·7	9·0	·3	
July 3	5569	T.28	3	Ma.	8−2·5	9·1	9·3	− ·2	
,, 7	5573	T.60	2	Ch.	13+2, 14+3, 16+6	10·0	9·5	+ ·5	
,, 8	5574	,,	1	,,	13+2, 14+3, 16+8	9·9	9·5	·4	
,, 15	5581	,,	,,	,,	13−2, =14, 16+2	10·3	9·9	·4	
,, 15	5581	T.28	2	Ma.	14−1	10·4	9·9	·5	
,, 18	5584	T.60	1	Ch.	13−4, 14−3	10·5	10·0	·5	
,, 22	5588	,,	,,	,,	13−4, 16+3	10·4	10·2	+ ·2	
,, 27	5593	,,	2	,,	=16	10·7	11·4	− ·7	
,, 28	5594	,,	,,	,,	=16	10·7	10·5	+ ·2	
Aug. 6	5603	,,	1	,,	16−4, 22+5	10·8	10·9	− ·1	
,, 6	5603	T.	,,	Pe.	19−3, 26+2	11·3	10·9	+ ·4	Slightly red.*
,, 6	5603	T.28	2	Ma.	16−4	11·1	10·9	+ ·2	Glimpsed.
,, 7	5604	T.	1	Pe.	26−2	11·8	10·9	9	
,, 8	5605	,,	,,	,,	26+1	11·5	10·9	+ ·6	
,, 8	5605	T.28	2	Ma.	...	...	10·9	...	Suspected.
,, 13	5610	T.60	1	Ch.	26+5	11·1	11·1	0	
,, 14	5611	T.	2	Pe.	...	...	11·2	...	Invisible.
,, 15	5612	T.160	1	Ch.	22−4, 26+5	11·3	11·2	+ ·1	Ill-defined.
,, 17	5614	T.28	,,	Ma.	...	...	11·2	...	Invisible.
,, 18	5615	T.90	,,	Ch.	26+5	11·1	11·3	− ·2	Well-defined, v. red.
,, 20	5617	,,	,,	,,	26+4, 28+6	11·3	11·3	0	,, ,,
,, 20	5617	T.	,,	Pe.	26−5	12·1	11·3	+ ·8	
,, 20	5617	T.28	,,	Ma.	...	...	11·3	...	Invisible.
Sept. 3	5631	,,	,,	,,	...	...	11·4	...	,,
,, 5	5633	T.	,,	Pe.	...	*13·0*	11·4	1·6	
,, 9	5637	T.60	,,	Ch.	=26, 28+3	11·6	11·4	·2	
,, 15	5643	,,	,,	,,	22−6, 26+3, 28+5	11·5	11·2	·3	
,, 18	5646	T.	,,	Pe.	...	*12·0*	11·0	1·0	
Oct. 2	5660	T.28	2	Ma.	16+3	10·4	10·3	+ ·1	
,, 3	5661	T.60	1	Ch.	=13, 14+3, 16+6	10·0	10·3	− ·3	
,, 18	5676	,,	,,	,,	6−10, 13+5	9·5	9·4	+ ·1	
,, 18	5676	T.28	2	Ma.	8−2	9·0	9·4	− ·4	
,, 31	5689	T.60	,,	Ch.	6−2, 8+3	8·6	8·8	− ·2	
Nov. 16	5705	T.28	,,	Ma.	6+1·5	8·4	8·3	+ ·1	
,, 28	5717	T.30	,,	Ch.	6−2, 8+1	8·7	8·0	+ ·7	
Dec. 8	5727	T.95	1	,,	5−6, 6+6, 8+8	7·9	7·9	0	
,, 18	5737	,,	2	,,	2−9, 5−6, 6+6, 8+9	7·9	7·8	+ ·1	
,, 27	5746	,,	1	,,	5−3, 6+4, 8+7	8·0	7·9	− ·1	
1902.									
Jan. 4	5754	T.20	2	LeB.	6+3	8·2	8·0	+ ·2	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Jan. 4	5754	T.95	2	Ch.	5−3, 6+2	8·0	8·0	0	
,, 4	5754	T.28	1	Ma.	2−11, 6+4	8·1	8·0	+ ·1	
,, 5	5755	T.95	,,	Ch.	5−3, 6+2	8·0	8·0	0	
,, 13	5763	T.20	2	LeB.	6−1	8·6	8·3	+ ·3	
,, 29	5779	T.30	1	Ch.	6−3, 8+2	8·7	8·8	− ·1	
,, 31	5781	T.95	,,	,,	6−3, 8+2	8·7	8·8	·1	Ruddy.
Feb. 9	5790	,,	2	,,	=8	8·8	9·2	·4	
,, 11	5792	,,	1	,,	=8	8·8	9·3	− ·5	Ruddy.
,, 27	5808	,,	,,	,,	13+2, =14, 16+6	10·1	10·1	0	,,
,, 28	5809	,,	,,	,,	13+2, 14+3, 15+3, 16+6	10·0	10·1	− ·1	,,
Mar. 25	5834	,,	,,	,,	16−5, 19−2, =21, 22+1	11·1	11·3	·2	
Apr. 3	5843	,,	,,	,,	=21, 22+2, 26+4, 28+6	11·1	11·4	·3	
,, 13	5853	,,	3	,,	22−3, =23, 26+2	11·4	11·5	− ·1	
,, 18	5858	,,	,,	,,	26−3, =28	11·9	11·4	+ ·5	
,, 18	5858	T.28	2	Ma.	...	...	11·4	...	Invisible.
,, 23	5863	T.95	3	Ch.	=26, 28+3	11·6	11·3	·3	
,, 24	5864	,,	1	,,	=26, 28+3	11·6	11·2	·4	
,, 27	5867	,,	,,	,,	26−3, =28	11·9	11·1	·8	Red.
May 5	5875	,,	2	,,	21−3, 22−4	11·5	10·7	·8	
,, 8	5878	,,	1	,,	=21, =22, 16−4	11·1	10·6	+ ·5	
,, 24	5894	T.28	2	Ma.	7−8, 8−5, 9+2, 12+2	9·5	9·7	− ·2	
,, 25	5895	T.95	1	Ch.	8−6, 13+8	9·9	9·6	+ ·3	
,, 25	5895	T.28	2	Ma.	8−3·5	9·4	9·6	− ·2	
,, 26	5896	T.95	1	Ch.	8−6, 13+8	9·4	9·5	·1	
June 4	5905	T.28	3	Ma.	8+1	8·7	9·1	− ·4	
,, 7	5908	T.	...	Co.	...	*9·3*	9·0	+ ·3	
,, 24	5925	T.28	2	Ma.	2−12, 6+3	8·2	8·3	− ·1	
,, 28	5929	T.	...	Co.	...	*8·8*	8·3	+ ·5	
,, 29	5930	T.95	1	Ch.	6+2, 8+5	8·3	8·2	+ ·1	
July 3	5934	T.28	2	Ma.	5−6, 6+6	7·9	8·2	− ·3	
,, 6	5937	T.95	1	Ch.	6+3, 8+8	8·1	8·1	·0	
,, 7	5938	T.28	2	Ma.	5−8, 6+4	8·1	8·1	0	
,, 27	5958	,,	1	,,	5−6, 6+6	7·9	7·8	+ ·1	
Aug. 1	5963	,,	2	,,	5−3, 6+9	7·7	7·8	− ·1	
,, 9	5971	,,	,,	,,	5−8, 6+4	8·1	7·8	+ ·3	
,, 24	5986	T.	...	Co.	...	*8·3*	8·3	0	
,, 25	5987	T.28	1	Ma.	2−11, 6+4	8·1	8·3	− ·2	
Sept. 1	5994	T.	...	Co.	...	*8·8*	8·5	+ ·3	
,, 23	6016	,,	...	,,	...	*9·3*	9·3	0	
,, 29	6022	,,	...	,,	...	*9·3*	9·6	− ·3	
Oct. 10	6033	T.95	1	Ch.	13+2, 14+2	10·0	10·2	− ·2	
,, 14	6037	,,	,,	,,	=13, 16+6	10·1	10·3	·2	
,, 21	6044	,,	,,	,,	13−4, 16+1	10·5	10·7	·2	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Oct. 21	6044	T.28	1	Ma	...	...	10·7	...	Invisible.
,, 21	6044	T.	...	Co.	...	*10·0*	10·7	·7	
,, 26	6049	T.28	1	Ma.	=16	10·7	10·9	− ·2	
Nov. 7	6061	T.	...	Co.	...	*11·5*	11·3	+ ·2	
,, 9	6063	T.28	1	Ma.	=21	11·2	11·3	− ·1	Doubtful.
,, 11	6065	T.	...	Co.	...	*11·5*	11·3	+ ·2	
,, 28	6082	,,	...	,,	...	*12·0*	11·4	·6	
Dec. 4	6088	,,	...	,,	...	*12·0*	11·2	·8	
,, 20	6104	,,	...	,,	...	*11·0*	10·4	+ ·6	
,, 21	6105	T.28	1	Ma.	16+2·5, 13−2·5	10·4	10·4	0	
,, 31	6115	T.	...	Co.	...	*10·0*	9·8	+ ·2	
1903.									
Jan. 3	6118	T.28	1	Ma.	8−2	9·0	9·6	− ·6	
,, 23	6138	T.	,,	Co.	6−1	8·6	8·7	− ·1	
,, 28	6143	T.28	,,	Ma.	=8	8·8	8·5	+ ·3	
Feb. 1	6147	T.	2	Co.	6+5	8·0	8·4	− ·4	
,, 13	6159	,,	1	,,	6+3	8·2	8·1	+ ·1	
,, 17	6163	T.28	,,	Ma.	6+3	8·2	8·0	+ ·2	
,, 21	6167	T.	,,	Co.	6+5	8·0	8·0	0	
,, 28	6174	,,	,,	,,	6+5	8·0	7·9	+ ·1	
,, 28	6174	,,	,,	Ma.	2−7·5, 6+7·5	7·8	7·9	− ·1	
Mar. 3	6177	T.28	,,	,,	5−6, 6+6	7·9	7·9	0	Ruddy.
,, 5	6179	T.	,,	Co.	6+6	7·9	7·9	0	
,, 16	6190	,,	,,	,,	6+6	7·9	7·9	0	
,, 16	6190	T.28	,,	Ma.	5−6, 6+6	7·9	7·9	0	
,, 28	6202	T.	,,	Co.	6+4	8·1	8·0	+ ·1	
Apr. 2	6207	,,	,,	,,	6+5	8·0	8·2	− ·2	
,, 13	6218	,,	,,	,,	6+4	8·1	8·5	·4	
,, 24	6229	,,	...	,,	=8	8·8	8·9	− ·1	
May 15	6250	,,	...	,,	16+3	10·4	9·8	+ ·6	
,, 24	6259	,,	...	,,	=19	10·9	10·2	·7	
June 21	6287	,,	...	,,	22−3	11·4	11·3	·1	
July 23	6319	,,	...	,,	19−1	11·0	10·9	+ ·1	
Aug. 25	6352	,,	...	,,	8−2	9·0	9·1	− ·1	
Sept. 2	6360	,,	...	,,	=6	8·5	8·8	− ·3	
,, 12	6370	,,	...	,,	=6	8·5	8·4	+ ·1	
,, 18	6376	,,	...	,,	6−2, 8+2	8·7	8·3	+ ·4	
,, 25	6383	,,	...	,,	5−6, 6+6	7·9	8·1	− ·2	
Oct. 12	6400	B.	...	,,	6+5	8·0	7·9	+ ·1	
,, 12	6400	T.28	1	Ma.	=5	7·3	7·9	− ·6	
,, 15	6403	T.	...	Co.	6+5	8·0	7·9	+ ·1	
,, 25	6413	,,	...	,,	6+5	8·0	7·9	·1	
,, 30	6418	T.28	1	Ma.	5−8, 6+4	8·1	7·9	+ ·2	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Nov. 6	6425	T.28	1	Ma.	2··9, 6+6	7·9	8·0	− ·1	
,, 14	6433	T.	...	Co.	6+4	8·1	8·2	·1	
,, 21	6440	T.28	1	Ma.	6+2	8·3	8·4	− ·1	
Dec. 11	6460	T.	...	Co.	8−2	9·0	9·2	− ·2	
1904.									
Jan. 3	6483	,,	...	,,	...	*9·5*	10·2	− ·7	Doubtful.
,, 10	6490	,,	...	,,	16−1·5, 20+1·5	10·8	10·6	+ ·2	
,, 13	6493	,,	...	,,	=16	10·7	10·7	0	
,, 14	6494	T.28	1	Ma.	...	...	10·7	...	Invisible.
,, 22	6502	T.	...	Co.	16−1	10·8	11·1	− ·3	
Feb. 6	6517	,,	...	,,	16−3	11·0	11·4	·4	
Mar. 10	6550	,,	...	,,	16+7	10·0	10·5	− ·5	
,, 10	6550	T.28	1	Ma.	16−1, 19+1	10·8	10·5	+ ·3	
,, 21	6561	T.	...	Co.	8−5	9·3	9·9	− ·6	*
Apr. 3	6574	T.28	1	Ma.	8−2	9·0	9·2	·2	
,, 6	6577	T.	...	Co.	8+1	8·7	9·1	− ·4	
,, 9	6580	T.28	1	Ma.	8−2	9·0	9·0	0	
May 18	6619	,,	,,	,,	5−4, 6+8	7·7	7·9	− ·2	Ruddy.
,, 18	6619	T.	...	Co.	6+5	8·0	7·9	+ ·1	
June 3	6635	,,	...	,,	6−5	8·0	7·9	+ ·1	
,, 3	6635	T.28	1	Ma.	=2	7·0	7·9	− ·9	Ruddy.
,, 5	6637	,,	,,	,,	5+2	7·1	7·9	·8	
,, 7	6639	,,	,,	,,	5−4, 6+8	7·7	7·9	·2	
,, 22	6654	,,	,,	,,	5−4, 6+8	7·7	8·2	− ·5	
,, 28	6660	,,	,,	,,	6+2	8·3	8·3	0	
July 3	6665	,,	,,	,,	6+2	8·3	8·5	− ·2	
,, 5	6667	T.	...	Co.	=6	8·5	8·6	− ·1	
,, 9	6671	T.28	1	Ma.	=8	8·8	8·7	+ ·1	
,, 12	6674	T.	...	Co.	6−2, 8+2	8·7	8·8	− ·1	
,, 15	6677	T.28	1	Ma.	=8	8·8	8·9	·1	
,, 20	6682	,,	2	,,	6−3	8·8	9·1	− ·3	
Aug. 2	6695	,,	1	,,	15+3	10·1	9·7	+ ·4	
,, 2	6695	T.	...	Co.	16+2	10·5	9·7	·8	
,, 8	6701	T.28	1	Ma.	=11	10·0	10·0	0	About, difficult.
,, 11	6704	,,	,,	,,	16+1	10·6	10·2	+ ·4	
,, 12	6705	T.	...	Wm.	=19	10·9	10·2	·7	*
,, 14	6707	,,	...	Co.	16−2	10·9	10·3	·6	
,, 17	6710	T.28	1	Ma.	16··1	10·8	10·4	·4	
,, 18	6711	,,	,,	,,	...	...	10·5	...	Invisible.
,, 28	6721	T.	...	Co.	22−2	11·3	10·9	+ ·4	
,, 29	6722	,,	...	Wm.	=19	10·9	10·9	0	*
Sept. 4	6728	,,	...	,,	...	...	11·2	...	Just visible < 19.
Oct. 3	6757	T.28	1	Ma.	...	...	11·3	...	Invisible.
,, 3	6757	T.	...	Co.	...	*12·3*	11·3	+1·0	V. faint
,, 29	6783	,,	...	,,	16+3	10·4	10·0	+ ·4	

(4557) S URSÆ MAJORIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Nov. 12	6797	T.	1	Co.	8 – 1	8·9	9·2	– ·3	Poor obs.
,, 14	6799	T.28	1	Ma.	8 – 5	9·3	9·1	+ ·2	
Dec. 5	6820	T.	...	Co.	8 – 3	9·1	8·3	·8	
,, 8	6823	,,	.	Wm.	8 – 5	9·3	8·3	1·0	
,, 14	6829	T.28	1	Ma.	8 – 3	9·1	8·1	+1·0	

(4826) R HYDRÆ.

NOTES.

Star F = S.D.M. – 22° 3607, estimated 9·76 m.
,, Z = S.D.M. – 22° 3645, 6·40 m. P.D.M.
Data for mean curve:—Period, 425 d. $M - m$, 190 d. Variation, 4·5 m. to 9·7 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
April 30	4775	B.	2	Ma.	...	...	7·0	...	Invisible < 7·8
May 2	4777	,,	1	,,	2 – 7	8·5	6·9	+1·6	Just glimpsed.
,, 7	4782	,,	,,	,,	...	...	6·7	...	Invisible < 7·8.
,, 27	4802	,,	,,	,,	...	...	6·0	...	,,
1901.									
May 11	5516	T.28	,,	,,	= F	9·8	9·7	+ ·1	
,, 16	5521	,,	2	,,	= F	9·8	9·7	+ ·1	
1902.									
May 5	5875	B.	1	,,	...	...	8·5	...	Invisible.
,, 24	5894	,,	3	,,	...	...	9·2	...	,,
,, 25	5895	T.28	2	,,	u + 2	8·8	9·2	– ·4	
1903.									
Mar. 5	6179	T.	1	Co.	...	*5·3*	5·1	+ ·2	Doubtful.
,, 21	6195	...	...	Or.	= h	5·1	5·5	– ·4	
,, 28	6202	T.	...	Co.	...	*6·5*	5·7	+ ·8	About.
April 11	6216	,,	...	,,	...	*6·2*	6·0	+ ·2	Doubtful.
,, 11	6216	B.	2	Ma.	h – 5	5·6	6·0	– ·4	
,, 24	6229	T.	...	Co.	...	7·0	6·4	+ ·6	About.
May 15	6250	,,	...	,,	...	*8·0*	7·0	1·0	,,

(4826) R HYDRÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
April 6	6577	B.	2	Ma.	h – 20	7·1	4·8	2·3	Uncertain.
,, 9	6580	T.	...	Co.	= h	5·1	4·8	·3	
,, 10	6581	B.	1	Ma.	= h	5·1	4·8	+ ·3	
,, 12	6583	,,	2	,,	h + 3·5	4·7	4·8	– ·1	
,, 16	6587	T.	...	Co.	h + 3	4·8	4·9	– ·1	
May 2	6603	N.E.	...	,,	h – 1	5·2	5·2	0	Ruddy.
,, 2	6603	B.	1	Ma.	h – 4	5·5	5·2	+ ·3	
,, 3	6604	,,	,,	,,	h – 2·5	5·3	5·2	+ ·1	
,, 14	6615	...	...	Co.	h – 4	5·5	5·5	0	
,, 18	6619	...	...	,,	...	*6·0*	5·6	+ ·4	
,, 18	6619	B. & T.28	...	Ma	h – 10, Z + 1·5	6·2	5·6	·6	Warm, ruddy hue.
June 3	6635	...	...	Co.	...	*7·0*	6·1	·9	Poor obs.
,, 4	6636	T.28	2	Ma.	h – 10, r + 10	6·5	6·1	·4	
,, 5	6637	,,	1	,,	r + 12	6·6	6·1	+ ·5	About. *

(4847) S VIRGINIS.

NOTE.

Data for mean curve :—Period, 377 d. $M - m$, 157 d. Variation, 6·9 m. to 12·5 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Apr. 18	5128	T.28	2	Ma.	...	...	11·0	...	Invisible.
,, 20	5130	B.	,,	Ke.	...	*8·3*	10·9	– 2·6	*
,, 30	5140	,,	,,	,,	...	*8·0*	10·4	– 2·4	*
June 17	5188	,,	3	Ma.	...	...	7·6	...	Invisible.
,, 25	5196	T.28	2	,,	7 – 5, 8 – 5, 12 – 5	10·3	7·4	+ 2·9	
,, 26	5197	,,	,,	,,	...	*10·0*	7·3	+ 2·7	Suspected. 10·0?
1901.									
Mar. 25	5469	T.30	,,	Ch.	= 14	10·0	12·2	– 2·2	
Apr. 22	5497	T.	,,	Or.	...	...	11·3	...	Invisible < 9·5.
May 11	5516	T.28	,,	Ma.	...	*11·0*±	10·5	+ ·5	Just glimpsed.
,, 14	5519	,,	,,	,,	...	*11·0*±	10·3	+ ·7	,, ,,
,, 15	5520	,,	,,	,,	...	*11·0*±	10·3	+ ·7	,, ,,
,, 16	5521	,,	,,	,,	...	...	10·2	...	Just held < 9·8.
,, 18	5523	,,	,,	,,	...	...	10·1	...	Suspected.
,, 20	5525	,,	,,	,,	...	...	10·0	...	Invisible.
,, 22	5527	,,	,,	,,	7 – 3	9·9	9·9	0	Distinctly seen.

(4847) S VIRGINIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Mar. 18	6192	T.	...	Co.	...	...	12·5	...	Invisible < 13·0.
Apr. 9	6214	T.28	1	Ma.	...	...	12·4	...	Invisible.
,, 13	6218	T.	..	Co.	...	...	12·3	...	,, < 13·0.
,, 24	6229	T.	...	Co.	...	...	12·1	...	,, < 13·0.
May 15	6250	,,	...	,,	...	...	11·3	...	,, < 13·0.
,, 24	6259	,,	...	,,	23–6	12·6	11·0	+1·6	Doubtful.
1904.									
Mar. 21	6561	,,	...	,,	...	...	12·4	...	Invisible < 10·0.
Apr. 6	6577	,,	...	,,	...	...	12·5	...	,,
,, 9	6580	T.28	...	Ma.	...	...	12·5	...	,,
May 18	6619	T.	...	Co.	...	...	11·6	...	,,
June 3	6635	,,	...	,,	12–2	10·7	11·0	− ·3	
,, 5	6637	T.28	1	Ma.	...	...	11·0	...	Invisible.
July 5	6667	T.	2	Co.	7–3	9·9	9·3	+ ·6	

(5237) R BOÖTIS.

NOTES.

Star Z = D.M. + 26° 2575, 7·01 m. P.D.M.

Data for mean curve:—Period, 223 d. $M - m$, 102 d. Variation, 6·8 m. to 11·8 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
May 7	4782	B.	1	Ma.	...	...	6·9	...	Invisible.
,, 8	4783	,,	2	,,	...	8·5±	6·9	+1·6	Just glimpsed.
,, 27	4802	,,	,,	,,	1–2, 2+10	7·3	6·8	·5	
,, 28	4803	,,	,,	,,	1–1, Z–3	7·2	6·8	+ ·4	
,, 29	4804	,,	3	,,	1+1	6·8	6·8	0	
,, 30	4805	,,	2	,,	=1	6·9	6·8	+ ·1	
,, 31	4806	,,	,,	,,	1–1, Z–4	7·2	6·8	·4	
June 2	4808	,,	,,	,,	1–7, Z–3, 2+5	7·6	6·8	·8	
,, 3	4809	,,	,,	,,	1–2, Z–2, 2+5	7·4	6·8	·6	
,, 8	4814	,,	,,	,,	1–2, Z–6·5	7·4	6·9	·5	
,, 9	4815	,,	,,	,,	1–2·5, Z–5	7·3	6·9	·4	

(5237) R BOÖTIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
July 8	4844	B.	2	Ma.	...	...	8·0	...	Invisible.
1900.									
June 25	5196	T.28	,,	,,	...	...	9·3	...	,,
Aug. 25	5257	,,	1	,,	1−6·5, 2+6·5	7·7	6·8	·9	
,, 30	5262	,,	2	,,	1−6·5, 2+6·5	7·7	6·9	·8	
Sept. 2	5265	,,	,,	,,	2+3·5	8·1	6·9	1·2	
,, 12	5275	,,	,,	,,	2+2·5	8·2	7·2	1·0	
,, 14	5277	,,	1	,,	2−3, 3+1	8·7	7·2	1·5	
,, 28	5291	,,	,,	,,	3−2, 4+2	9·0	7·8	1·2	
1901.									
Feb. 17	5433	B.	2	Or.	1−15	8·4	8·3	+ ·1	Approximate.*
Mar. 12	5456	,,	1	Ke.	a−5·5, 1+5·5	6·4	7·1	− ·7	
,, 21	5465	,,	2	,,	a−5·5, 1+5·5	6·4	6·9	− ·5	
,, 24	5468	,,	3	Or.	=1	6·9	6·8	+ ·1	About.
,, 25	5469	,,	1	Ch.	1+3	6·6	6·9	− ·3	
,, 26	5470	,,	2	Ke.	a−6, 1+4	6·5	6·9	·4	
,, 27	5471	,,	,,	Ch.	1+4	6·5	6·8	− ·3	
,, 28	5472	T.30	,,	,,	1−2	7·1	6·8	+ ·3	
,, 28	5472	B.	,,	Ke.	a−6·5, 1+3·5	6·5	6·8	− ·3	
,, 28	5472	,,	3	Or.	1+2	6·7	6·8	− ·1	
,, 31	5475	,,	2	Ke.	=1	6·9	6·8	+ ·1	
,, 31	5475	T.30	,,	Ch.	=1	6·9	6·8	+ ·1	
Apr. 1	5476	,,	,,	,,	a−6, 1+2	6·6	6·8	− ·2	
,, 1	5476	T.	1	Or.	1+2	6·7	6·8	− ·1	
,, 5	5480	,,	,,	,,	1−3	7·2	6·8	+ ·4	
,, 5	5480	B.	,,	Ke.	1+3	6·6	6·8	− ·2	
,, 8	5483	,,	,,	Or.	=1	6·9	6·8	+ ·1	About.
,, 9	5484	,,	,,	Ke.	=1	6·9	6·9	0	,,
,, 9	5484	,,	,,	Ch.	a−5, b−2, 1+2	6·5	6·9	− ·4	
,, 10	5485	,,	,,	,,	a−6, 1+2	6·6	6·9	− ·3	
,, 10	5485	,,	,,	Or.	=1	6·9	6·9	0	About.
,, 14	5489	,,	,,	Ke.	1+0·5	6·9	6·9	0	
,, 16	5491	,,	2	,,	1−1·5	7·1	7·0	+ ·1	
,, 18	5493	,,	1	Ch.	1−4	7·3	7·0	·3	
,, 18	5493	,,	,,	Or.	1−4	7·3	7·0	·3	About.
,, 20	5495	,,	,,	Ch.	1−6, 3+5	7·9	7·1	·8	
,, 21	5496	T.30	,,	,,	1−6, 3+6	7·8	7·1	·7	
,, 22	5497	,,	2	,,	1−9·5, 3+9·5	7·8	7·1	+ ·7	
,, 23	5498	B.	2	Or.	1−11	8·0	7·1	+ ·9	*
,, 25	5500	T.30	1	Ch.	3+6	8·2	7·2	1·0	
May 6	5511	,,	,,	,,	=3, 6+5	9·0	7·6	1·4	
,, 8	5513	,,	,,	,,	=3, 6+6	8·9	7·7	1·2	
,, 11	5516	T.28	,,	Ma.	=3	8·8	7·9	·9	Doubtful.
,, 12	5517	T.30	,,	Ch.	6+3	9·4	7·9	1·5	
,, 13	5518	,,	,,	,,	3−4, 6+4	9·2	8·0	1·2	
,, 14	5519	T.28	2	Ma.	3−1, 4+1	9·0	8·0	1·0	
,, 16	5521	,,	,,	,,	=4	9·2	8·1	1·1	
,, 16	5521	T.30	1	Ch.	6−3	10·0	8·1	1·9	
,, 18	5523	T.28	2	Ma.	3−3·5	9·1	8·2	·9	

(5237) R BOÖTIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
May 19	5524	T.30	1	Ch.	=6	9·7	8·3	1·4	About.
,, 20	5525	,,	,,	,,	6−2, 7+2	9·9	8·4	1·5	
,, 20	5525	T.28	2	Ma.	3−3·5, =4	9·2	8·4	·8	
,, 22	5527	,,	,,	,,	4−1·5	9·4	8·5	·9	
,, 25	5530	,,	3	,,	4−4, 7+4	9·7	8·6	1·1	Rather doubtful.
July 6	5572	,,	2	,,	...	...	11·2	...	Invisible.
Aug. 23	5620	,,	3	,,	...	...	11·2	...	,,
Sept. 3	5631	,,	1	,,	13+1	11·2	10·6	·6	About.
1902.									
May 10	5880	,,	,,	,,	13+1·5	11·1	8·5	2·6	
,, 13	5883	,,	2	,,	12+2·5	10·8	8·2	2·6	
,, 24	5894	,,	,,	,,	=2	8·4	7·6	·8	
,, 25	5895	,,	,,	,,	2−4, 3+3	8·7	7·5	1·2	
,, 26	5896	B.	,,	,,	...	...	7·5	...	Invisible.
June 24	5925	T.28	,,	,,	1−5	7·4	6·8	·6	Warm tinge.
,, 26	5927	,,	,,	,,	1−6	7·5	6·8	·7	
,, 27	5928	B.	,,	,,	1−8	7·7	6·8	·9	
,, 28	5929	,,	,,	,,	1−5	7·4	6·8	·6	
July 3	5934	T. & B.	1	,,	1−10	7·9	6·9	1·0	
,, 6	5937	,,	2	,,	1−12	8·1	6·9	1·2	About.
,, 7	5938	T.28	,,	,,	1−7·5, 2+7·5	7·7	6·9	·8	
,, 8	5939	B.	,,	,,	...	...	6·9	...	Faintly glimpsed.
,, 11	5942	T.28	1	,,	2+4	8·0	7·0	1·0	
,, 27	5958	,,	,,	,,	2−2, 3+2	8·6	7·5	1·1	
Aug. 1	5963	,,	,,	,,	=3	8·8	7·8	1·0	
,, 25	5987	,,	,,	,,	=13	11·3	9·2	+2·1	
1903.									
Aug. 21	6348	B.	,,	Or.	...	..	7·3	...	<6·9.
1904.									
Mar. 10	6550	,,	,,	Ma.	...	...	8·6	...	Invisible.
Apr. 6	6577	,,	,,	,,	1−1	7·0	7·1	− ·1	
,, 6	6577	,,	2	Or.	=1	6·9	7·1	− ·2	
,, 9	6580	,,	1	Ma.	1−1	7·0	7·0	0	
,, 10	6581	,,	,,	,,	=1	6·9	7·0	− ·1	
,, 12	6583	,,	,,	,,	1−2	7·1	7·0	+ ·1	
,, 20	6591	,,	2	,,	=1	6·9	6·9	0	
May 2	6603	,,	,,	,,	1−1	7·0	6·8	+ ·2	
,, 18	6619	T.28	1	,,	2+5	7·9	7·1	·8	
June 3	6635	,,	,,	,,	=3	8·8	7·8	1·0	
,, 5	6637	,,	,,	,,	3+3	8·5	7·9	+ ·6	
July 8	6670	T.28	1	,,	...	...	9·9	...	Invisible.
,, 12	6674	,,	2	,,	=13	11·3	10·1	+1·2	About, difficult.
Aug. 1	6694	,,	1	,,	...	...	11·2	...	Invisible.

(5504) S CORONÆ.

NOTES.

Star E unidentified. Estimated as 10·0 m. Rough position as compared with 5 of Hagen $\Delta\alpha - 34^s$, $\Delta\delta + 9'$.

Data for mean curve:—Period, 361 d. $M - m$, 120 d. Variation, 7·0 m. to 12·2 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
May 5	4780	B.	2	Ma.	...	*8·0*±	7·5	+ ·5	Just glimpsed.
,, 7	4782	,,	1	,,	...	...	7·5	...	<8·0.
,, 8	4783	,,	2	,,	...	...	7·5	...	Suspected.
,, 27	4802	,,	,,	,,	...	...	7·9	...	Invisible.
Aug. 23	4890	T.28	,,	,,	..	*11·0*	10·5	+ ·5	
1900.									
April 17	5127	B.	1	,,	...	*8·0*	7·2	·8	
,, 26	5136	T.28	,,	,,	=4	7·8	7·4	·4	
,, 28	5138	,,	,,	,,	4+1	7·7	7·4	·3	
June 26	5197	,,	2	,,	=9	9·4	8·9	·5	
July 2	5203	,,	,,	,,	10+5	9·8	9·1	·7	Much<k.
,, 30	5231	,,	1	,,	=10	10·3	9·9	·4	
Aug. 17	5249	,,	2	,,	10−5	10·8	10·5	+ ·3	Difficult.
,, 22	5254	,,	1	,,	...	...	10·6	...	Just suspected.
,, 24	5256	,,	,,	,,	...	...	10·7	...	,, ,,
,, 30	5262	,,	2	,,	...	...	10·8	...	Invisible.
1901.									
Feb. 21	5437	B.	,,	Ke.	2−3	7·3	7·7	− ·4	
Mar. 12	5456	,,	1	,,	2−1	7·1	7·1	0	
,, 21	5465	,,	2	,,	2−2	7·2	7·0	+ ·2	
,, 22	5466	,,	1	,,	2−1	7·1	7·0	+ ·1	
,, 24	5468	,,	3	Or.	=2	7·0	7·0	0	About.
,, 25	5469	T.	2	,,	=2	7·0	7·0	0	
,, 26	5470	B.	,,	Ke.	=2	7·0	7·0	0	About.
,, 28	5472	,,	,,	,,	=2	7·0	7·1	− ·1	,,
,, 28	5472	T.	3	Or.	2+2	6·8	7·1	·3	
,, 28	5472	T.30	2	Ch.	2+4	6·6	7·1	·5	
,, 31	5475	B.	,,	Ke.	=2	7·0	7·1	− ·1	About.
April 1	5476	T.	1	Or.	2−1	7·1	7·1	0	
,, 1	5476	T.30	2	Ch.	2−2	7·2	7·1	+ ·1	
,, 5	5480	,,	,,	,,	2−3	7·3	7·1	+ ·2	
,, 5	5480	T.	1	Or.	=2	7·0	7·1	− ·1	
,, 5	5480	B.	1	Ke.	=2	7·0	7·1	·1	About.
,, 8	5483	,,	,,	Or.	2+1	6·9	7·2	− ·3	
,, 9	5484	T.30	2	Ch.	2−4, 4+7	7·2	7·2	0	
,, 9	5484	B.	1	Ke.	2−2	7·2	7·2	0	
10	5485	T.30	,,	Ch.	2−3, 4+7	7·2	7·2	0	

(5504) S CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Apr. 10	5485	T.	1	Or.	2 − 3, 4 + 4·5	7·3	7·2	+ ·1	
,, 12	5487	T.30	,,	Ch.	2 − 4, 4 + 3	7·4	7·2	·2	
,, 14	5489	,,	,,	,,	2 − 4, 4 + 3	7·4	7·2	·2	
,, 15	5490	T.	,,	Or.	2 − 3	7·3	7·2	·1	Reddish.
,, 17	5492	,,	2	,,	4 − 1·5, 5 + 1·5	8·1	7·3	·8	
,, 18	5493	,,	1	,,	5 + 4, = h	8·1	7·3	·8	
,, 18	5493	T.30	,,	Ch.	2 − 6, 4 − 1	7·7	7·3	·4	
,, 19	5494	B.	,,	,,	2 − 7, 4 + 2	7·6	7·3	·3	
,, 19	5494	T.	1	Or.	2 − 5, = h, 5 + 4	7·9	7·3	·6	
,, 19	5494	B.	,,	Ke.	2 − 3·5	7·3	7·3	0	
,, 20	5495	,,	,,	Ch.	4 − 3, h + 4	7·9	7·3	·6	
,, 20	5495	T.	,,	Or.	2 − 4, 4 + 1, 5 + 3	7·8	7·3	·5	
,, 21	5496	T.30	,,	Ch.	4 − 3, h + 4	7·9	7·4	+ ·5	
,, 22	5497	T.	2	Or.	2 − 5, 4 + 2, 5 + 4	7·4	7·4	+ ·3	
,, 23	5498	T.30	1	Ch.	= 4, h + 1	8·0	7·4	·6	
,, 27	5502	T.	2	Or.	4 + 1, 5 + 4	7·9	7·5	·4	
,, 30	5505	T.30	,,	Ch.	5 + 3	8·2	7·5	·7	
May 6	5511	,,	1	,,	= 5	8·5	7·6	·9	
,, 8	5513	,,	,,	,,	4 − 5, 5 + 2	8·3	7·7	·6	
,, 11	5516	B.	1	Ke.	...	...	7·7	...	Barely visible.
,, 12	5517	T.30	,,	Ch.	5 − 2	8·7	7·8	·9	
,, 13	5518	,,	,,	,,	5 − 3	8·8	7·8	1·0	
,, 14	5519	,,	,,	,,	5 − 2, 7 + 2	8·8	7·8	1·0	
,, 14	5519	T.28	2	Ma.	7 + 2·5	8·8	7·8	1·0	
,, 15	5520	,,	,,	,,	= 7	9·1	7·8	1·3	
,, 16	5521	,,	,,	,,	5 − 2	8·7	7·9	·8	
,, 16	5521	T.30	1	Ch.	5 − 4, 7 + 1, 9 + 3	9·0	7·9	1·1	
,, 18	5523	T.28	2	Ma.	5 − 1·5	8·6	7·9	·7	
,, 19	5524	T.30	1	Ch.	5 − 3, 7 + 2, 9 + 3	8·9	7·9	1·0	
,, 20	5525	,,	,,	,,	5 − 2, 7 + 3, 9 + 4	8·8	8·0	·8	
,, 20	5525	T.28	3	Ma.	5 − 2, 7 + 2	8·8	8·0	·8	
,, 22	5527	,,	2	,,	5 − 2, 7 + 2	8·8	8·0	·8	
,, 24	5529	T.30	1	Ch.	5 − 4, = 7, 9 + 2	9·0	8·1	·9	
,, 25	5530	T.28	3	Ma.	7 + 1·5	8·9	8·1	·8	
June 6	5542	T.30	1	Ch.	− 7, 9 + 3	9·1	8·4	·7	
,, 10	5546	,,	,,	,,	= 9, 10 + 6	9·5	8·5	1·0	
,, 23	5559	,,	,,	,,	9 − 8, 10 + 6, = E	9·9	8·9	1·0	
July 6	5572	T.28	2	Ma.	10 + 1·5	10·1	9·3	+ ·8	
,, 7	5573	T.60	,,	Ch.	10 + 4	9·9	9·4	·5	
,, 15	5581	,,	1	,,	10 + 2	10·1	9·6	·5	
,, 15	5581	T.28	2	Ma.	10 − 1·5	10·4	9·6	·8	
,, 18	5584	,,	3	,,	10 + 2	10·1	9·7	·4	
,, 18	5584	T.30	1	Ch.	10 + 3	10·0	9·7	·3	
,, 22	5588	,,	,,	,,	10 + 2	10·1	9·8	·3	
,, 28	5594	T.160	2	,,	10 − 3	10·6	10·0	·6	
Aug. 6	5603	T.60	1	,,	10 − 4, 14 + 6	10·9	10·3	·6	
,, 6	5603	T.28	2	Ma.	10 − 2·5	10·5	10·3	·2	
,, 8	5605	,,	,,	,,	10 − 2·5	10·5	10·4	·1	
,, 10	5607	,,	,,	,,	10 − 4·5	10·7	10·4	·3	
,, 13	5610	T.60	1	Ch.	10 − 6, 14 + 4	11·1	10·5	·6	
,, 17	5614	T.28	2	Ma.	10 − 5	10·8	10·6	·2	
,, 18	5615	T.60	1	Ch.	= 14	11·8	10·6	1·2	

(5504) S CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 20	5617	T.28	1	Ma.	...	...	10·7	...	Glimpsed.
,, 23	5620	,,	3	,,	...	...	10·8	...	Invisible.
Sept. 3	5631	,,	1	,,	...	...	11·0	...	Much < 10.
,, 4	5632	T.60	,,	Ch.	10 − 7, 13 − 5, 14 − 3, 18 + 4	11·4	11·0	·4	
,, 9	5637	,,	,,	,,	14 − 5, 18 + 2, 20 + 3	12·2	11·2	1·0	
,, 15	5643	,,	3	,,	= 18, 20 + 5	12·1	11·3	·8	Difficult.
Oct. 2	5660	T.28	2	Ma.	...	...	11·7	...	Invisible.
,, 3	5661	T.60	3	Ch.	= 20	12·4	11·7	·7	About, difficult.
,, 7	5665	T.160	3	,,	20 − 3	12·7	11·8	·9	,, ,,
1902.									
Mar. 3	5812	T.95	2	,,	2 − 4	7·4	7·2	·2	
Apr. 3	5843	,,	3	,,	2 − 6	7·6	7·1	+ ·5	
,, 13	5853	,,	2	,,	2 − 2	7·2	7·3	− ·1	
,, 18	5858	,,	1	,,	2 − 6, = 4, 5 + 2	7·9	7·4	+ ·5	
,, 23	5863	,,	2	,,	2 − 5	7·5	7·5	0	
,, 24	5864	,,	1	,,	2 − 8, 4 + 2, 5 + 4	7·8	7·5	+ ·3	
,, 27	5867	,,	,,	,,	4 + 3, 5 + 6	7·7	7·5	·2	
May 3	5873	T.28	,,	Ma.	4 − 2, 5 + 1	8·2	7·7	·5	Ruddy.
,, 4	5874	B.	2	,,	...	...	7·7	...	Just held.
,, 5	5875	T.95	1	Ch.	4 − 2, 5 + 4	8·0	7·7	·3	
,, 7	5877	B.	,,	Ma.	.	...	7·7	...	Just glimpsed.
,, 8	5878	T.28	2	,,	5 + 3	8·2	7·8	·4	
,, 10	5880	,,	1	,,	5 + 1·5	8·3	7·8	·5	
,, 13	5883	,,	2	,,	5 − 1	8·6	7·9	·7	
,, 24	5894	,,	,,	,,	5 − 1	8·6	8·2	·4	
,, 25	5895	,,	,,	,,	5 − 1, 7 + 3	8·7	8·2	·5	
,, 25	5895	T.95	1	Ch.	5 − 5	9·0	8·2	·8	
,, 26	5896	,,	,,	,,	5 − 4	8·9	8·2	·7	
June 24	5925	T.28	2	Ma.	= 9	9·4	9·1	·3	
,, 26	5927	,,	,,	,,	9 − 1	9·5	9·2	·3	
,, 29	5930	T.95	,,	Ch.	5 − 10, 10 + 8	9·5	9·3	·2	
July 3	5934	T.28	1	Ma.	9 − 5	9·9	9·4	+ ·5	
,, 6	5937	T.95	3	Ch.	10 + 13	9·0	9·5	− ·5	This seems an erroneous obs.—C. L. B.
,, 7	5938	T.28	2	Ma.	10 + 4	9·9	9·5	+ ·4	
,, 11	5942	,,	,,	,,	10 + 4·5	9·8	9·6	·2	
,, 27	5958	,,	1	,,	10 + 1	10·2	10·1	+ ·1	
Aug. 1	5963	,,	2	,,	10 − 2	10·5	10·2	+ ·3	
,, 25	5987	,,	1	,,	10 − 5	10·8	10·9	− ·1	Approximate.
1903.									
Mar. 5	6179	T.	,,	Co.	...	7·8	7·1	+ ·7	
,, 16	6190	,,	,,	,,	= 2	7·0	7·0	0	
,, 28	6202	,,	,,	,,	= 2	7·0	7·1	− ·1	
,, 30	6204	,,	,,	,,	= 2	7·0	7·2	− ·2	
Apr. 2	6207	,,	,,	,,	2 − 2	7·2	7·2	0	
,, 11	6216	,,	,,	,,	2 − 2	7·2	7·3	− ·1	
,, 24	6229	,,	...	,,	3 − 4	7·9	7·6	+ ·3	

(5504) S CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
May 15	6250	T.	...	Co.	10+10	9·3	8·1	1·2	
,, 25	6260	,,	...	,,	5−6, 10+8	9·3	8·3	+1·0	
June 21	6287	,,	...	,,	6−1·5, 8+1·5	9·0	9·2	− ·2	
July 23	6319	,,	..	,,	=10	10·3	10·1	+ ·2	
Aug. 25	6352	,,	...	,,	14+4	11·4	11·0	·4	
Sept. 12	6370	,,	...	,,	14−5, 20+5	12·1	11·5	·6	
,, 18	6376	,,	...	,,	14−5, 20+5	12·1	11·6	+ ·5	
Oct. 15	6403	,,	...	,,	20+3	12·1	12·1	0	
Nov. 14	6433	,,	...	,,	20+2	12·2	12·1	+ ·1	
1904.									
Mar. 21	6561	,,	...	,,	2+6	6·7	7·1	− ·4	
Apr. 6	6577	,,	...	,,	2+1	6·9	7·3	·4	
,, 6	6577	B.	1	Ma.	2+0·5	6·9	7·3	·4	
,, 6	6577	,,	2	Or.	=2	7·0	7·3	·3	
,, 9	6580	,,	,,	Ma.	2−1·5	7·1	7·4	·3	
,, 10	6581	,,	,,	,,	=2	7·0	7·4	·4	
,, 12	6583	,,	,,	,,	2−1	7·1	7·4	·3	
,, 16	6587	T.	...	Co.	2+1	6·9	7·5	− ·6	
,, 20	6591	T.28	2	Ma.	2−10	8·0	7·6	+ ·4	
,, 25	6596	T.	...	Co.	...	7·6	7·7	− ·1	*
May 2	6603	B.	1	Ma.	2−10	8·0	7·8	+ ·2	About.
,, 3	6604	,,	,,	,,	2−10	8·0	7·9	·1	
,, 18	6619	T.28	,,	,,	5−1·5	8·6	8·3	+ ·3	
,, 18	6619	T.	...	Co.	2−9	7·9	8·3	− ·4	
June 3	6635	,,	...	,,	2−7	7·7	8·7	−1·0	
July 5	6667	,,	...	,,	10+3	10·0	9·7	+ ·3	
,, 8	6670	T.28	1	Ma.	10+2	10·1	9·8	·3	
,, 12	6674	,,	,,	,,	10+2	10·1	10·0	·1	
,, 12	6674	T.	...	Co.	10+0·5	10·2	10·0	+ ·2	Doubtful.
Aug. 1	6694	T.28	1	Ma.	=10	10·3	10·5	− ·2	
,, 2	6695	T.	...	Co.	=10	10·3	10·6	·3	
,, 12	6705	T.28	1	Ma.	10−4	10·7	10·8	·1	
,, 14	6707	,,	,,	,,	10−4·5	10·7	10·9	− ·2	
,, 14	6707	T.	...	Co.	10−8	11·1	10·9	+ ·2	
,, 17	6710	T.28	1	Ma.	10−2	10·5	11·0	− ·5	
,, 28	6721	,,	,,	,,	10−5	10·8	11·2	− ·4	About.
,, 28	6721	T.	2	Co.	14+1	11·7	11·2	+ ·5	
Sept. 3	6727	T.28	1	Ma.	...	...	11·4	...	Invisible.
Oct. 3	6757	T.	3	Co.	...	...	12·0	...	,,
,, 7	6761	,,	2	,,	20−2	12·6	12·0	+ ·6	
,, 29	6783	,,	3	,,	...	...	12·2	...	Invisible.

(5667) R CORONÆ.

NOTES.

		P.D.M.
Star L	= ρ Coronæ	5·50 m.
„ M	= D.M. + 30° 2682	6·57 „
„ N	= „ + 31° 2742	6·35 „
„ P	= „ + 30° 2692	7·61 „
„ R	= θ Coronæ	4·07 „
„ S	= o „	5·63 „
„ T	= ι „	4·73 „

This being an "irregular" variable, the 8th and 9th columns remain blank.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Apr. 30	4775	B.	1	Ma.	b − 4, M + 4, e + 3	6·2			
May 2	4777	„	„	„	b − 5, M + 4, e + 3	6·2			
„ 3	4778	„	2	„	b − 6, M + 5, e + 4	6·2			
„ 4	4779	„	„	„	b − 2, M + 7, e + 6	5·9			
„ 5	4780	„	„	„	b − 4, M + 4, e + 3	6·2			
„ 6	4781	„	3	„	b − 4, M + 5, e + 4	6 1			
„ 7	4782	„	1	„	b − 3, M + 5, e + 4	6·1			
„ 8	4783	„	2	„	b − 2, M + 5, e + 4	6·1			
„ 27	4802	„	„	„	b − 2, M + 5, e + 7	6·0			
„ 28	4803	„	„	„	b − 2, M + 5, e + 7	6·0			
„ 29	4804	„	3	„	b − 1, M + 5, e + 7	5·9			
„ 30	4805	„	2	„	b − 2, M + 4, e + 6	6·0			
„ 31	4806	„	„	„	b − 2, M + 4, e + 5	6·1			
June 2	4808	„	„	„	b − 2, M + 4, e + 6	6·0			
„ 3	4809	„	„	„	b − 2, M + 4, e + 6	6·0			
„ 8	4814	„	„	„	= b, M + 5, e + 7	5·9			
„ 29	4835	„	„	„	b − 2, M + 5, e + 7	6·0			
July 7	4843	„	3	„	b − 1, M + 6, e + 8	5·9			
„ 8	4844	„	2	„	b − 2, M + 5, e + 5	6·0			
„ 16	4852	„	„	„	b − 2, M + 5, e + 7	6·0			
„ 27	4863	„	„	„	b − 3, M + 4, e + 8	6·0			
„ 29	4865	„	1	„	b − 4, M + 4, e + 7	6·1			
„ 31	4867	„	2	„	b − 4, M + 3, e + 4	6·2			
Aug. 23	4890	„	„	„	b − 7, M + 5, e + 8	6·1			
„ 24	4891	„	„	„	b − 5, M + 4, e + 6	6·1			
„ 31	4898	„	1	„	b − 4, M + 5, e + 7	6·0			
Sept. 2	4900	„	„	„	b − 4, M + 4, e + 6	6·1			
„ 3	4901	„	„	„	b − 2, M + 5, e + 8	5·9			
„ 11	4909	„	„	„	b − 4, M + 5, e + 6	6·1			
1900.									
Mar. 19	5098	„	„	Or.	b − 5, M + 3	6·2			
„ 26	5105	„	„	Ma.	= b	5·6	...	...	Very bright.

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Mar. 26	5105	B.	...	Ke.	b−1·5	5·7			
,, 29	5108	,,	...	,,	b−1·5	5·7			
,, 31	5110	,,	...	,,	b−1·5	5·7			
Apr. 16	5126	,,	2	Ma.	b−4, M+5, e+5	6·1			
,, 17	5127	,,	1	,,	b−3, M+5, e+7	6·0			
,, 18	5128	,,	2	,,	b−2, M+5, e+4	6·1			
,, 19	5129	,,	...	Ke.	b−1·5	5·7			
,, 19	5129	,,	1	Wl.	b−1, d+3	5·8			
,, 20	5130	,,	,,	,,	b−1, d+3	5·8			
,, 20	5130	,,	,,	Or.	b−5, M+5	6·1	...	...	Red.
,, 21	5131	,,	,,	Wl.	b−1, d+3	5·8			
,, 21	5131	,,	2	Ma.	b−2, M+7, e+4	6·0			
,, 22	5132	,,	,,	Wl.	b−1, d+3	5·8			
,, 26	5136	,,	1	Ma.	b−2, M+5, e+6	6·0			
,, 28	5138	,,	,,	,,	b−3, M+5, e+4	6·1			
,, 30	5140	,,	...	Ke.	b−1	5·7			
May 2	5142	,,	1	Wl.	b−1, d+3	5·8			
,, 7	5147	,,	2	,,	b−1, d+3	5·8			
,, 13	5153	,,	,,	Mi.	=b	5·6			
,, 16	5156	,,	1	,,	=b	5·6			
,, 16	5156	,,	...	Ke.	b−1	5·7			
,, 17	5157	,,	2	Wl.	c−4, b+1	5·9			
,, 17	5157	,,	3	Ma.	b−3, M+5, e+6	6·0			
,, 19	5159	,,	2	Mi.	=b	5·6			
,, 26	5166	,,	1	Wl.	b−2, d+2	5·9			
,, 28	5168	,,	2	,,	b−1, d+3	5·8			
,, 30	5170	,,	,,	,,	=b	5·6			
June 17	5188	,,	3	Ma.	b−3, M+4, e+5	6·1			
,, 25	5196	,,	2	,,	d−4, M+7, e+6	6·0			
,, 26	5197	,,	1	Wl.	b−2, d+5	5·7			
July 2	5203	,,	2	Ma.	b−5, M+6, e+7	6·0			
,, 15	5216	,,	,,	Or.	b−5, M+5	6·1			
,, 16	5217	,,	1	,,	b−6, M+4	6·2			
,, 18	5219	,,	,,	,,	b−5, M+5	6·1			
,, 23	5224	,,	,,	,,	b−5, M+5	6·1			
,, 23	5224	,,	,,	Ma.	b−3, M+5, e+6	6·0			
,, 24	5225	,,	...	Ke.	b−2	5·8			
,, 29	5230	,,	1	Ma.	b−5, M+3, e+4	6·2			
,, 30	5231	,,	,,	,,	b−5, M+3, e+4	6·2			
,, 30	5231	,,	,,	,,	b−5, M+5	6·1			
Aug. 2	5234	,,	,,	Pe.	L−5, M+1	6·2			
,, 3	5235	,,	2	,,	L−5, M+1	6·2			
,, 4	5236	,,	,,	,,	M+2	6·4			
,, 5	5237	,,	3	Ma.	b−10, M−1, e+2	6·6			
,, 6	5238	,,	2	Pe.	L−5, M+1	6·2			
,, 9	5241	,,	,,	,,	=M	6·6			
,, 10	5242	,,	,,	,,	M−1	6·7			
,, 11	5243	,,	,,	,,	...	...	...	...	Invisible<6·6.
,, 12	5244	,,	,,	,,	...	...	...	...	,, ,,
,, 13	5245	,,	,,	,,	N−2, P+3	6·9			
,, 14	5246	,,	,,	,,	N−2, P+3	6·9			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Aug. 15	5247	B.	1	Pe.	N − 2, P + 3	6·9			
,, 16	5248	,,	1	Wl.	f + 1	7·1			
,, 17	5249	,,	2	Ma.	f − 2	7·4			
,, 18	5250	,,	,,	,,	f − 1·5	7·3			
,, 18	5250	,,	1	Wl.	= f	7·2			
,, 19	5251	,,	,,	Pe.	N − 3, P + 2	7·0			
,, 20	5252	T.36	,,	Wl.	f + 2	7·0			
,, 22	5254	B.	,,	,,	= f	7·2			
,, 22	5254	,,	,,	Ma.	f − 1	7·3			
,, 22	5254	,,	,,	Pe.	N − 2, P + 3	6·9			
,, 24	5256	,,	,,	,,	N − 2, P + 3	6·9			
,, 24	5256	T.28	,,	Ma.	f − 2·5	7·4			
,, 24	5256	B.	,,	Or.	= f	7·2	...	...	About.
,, 25	5257	,,	,,	Ma.	f − 3	7·5			
,, 26	5258	B.	1	Or.	f + 2	7·0			
,, 26	5258	,,	,,	Wl.	f − 1	7·3			
,, 30	5262	,,	,,	Ma.	f − 1	7·3			
Sept. 2	5265	T.28	2	,,	f + 3	6·9			
,, 2	5265	B.	1	Or.	f + 3	6·9			
,, 11	5274	B.	2	,,	M + 2	6·4			
,, 12	5275	,,	,,	Pe.	f + 4	6·8			
,, 13	5276	,,	1	,,	M + 2	6·4			
,, 13	5276	T.36	,,	Wl.	f + 5	6·7			
,, 14	5277	B.	3	,,	M − 2	6·8			
,, 14	5277	,,	1	Ma.	M + 1, e + 2	6·5			
,, 14	5277	,,	2	Pe.	M + 3	6·3			
,, 15	5278	,,	1	,,	M + 3	6·3			
,, 15	5278	,,	2	Ma.	M + 1, e + 2	6·5			
,, 19	5282	,,	,,	Wl.	d − 2, M + 2	6·4			
,, 20	5283	,,	,,	,,	d − 2, M + 2	6·4			
,, 20	5283	,,	1	Pe.	M + 2	6·4			
,, 21	5284	,,	,,	,,	b − 3, M + 2	6·1			
,, 21	5284	,,	,,	Wl.	b − 8, d + 1	6·2			
,, 22	5285	,,	3	Pe.	b − 5, M + 5	6·1			
,, 23	5286	,,	1	,,	b − 2, M + 4	6·0			
,, 23	5286	,,	,,	Or.	b − 5, M + 5	6·1			
,, 27	5290	,,	,,	Ma.	b − 8, M + 5, e + 6	6·2			
,, 28	5291	,,	,,	,,	b − 5, M + 4, e + 6	6·1			
,, 28	5291	,,	,,	Or.	b − 5, M + 5	6·1			
Oct. 2	5295	,,	2	Wl.	b − 3·5	5·9			
,, 11	5304	,,	1	Or.	b − 5, M + 5	6·1			
,, 12	5305	,,	1	Ma.	b − 5, M + 6, e + 7	6·0			
,, 14	5307	,,	,,	Wl.	b − 3, M + 5	6·0			
,, 21	5314	,,	,,	,,	b + 2	5·4	...	...	Doubtful.
,, 21	5314	,,	,,	Or.	b − 5, M + 5	6·1			
,, 26	5319	,,	,,	,,	b − 5, M + 5	6·1			
,, 26	5319	,,	,,	Ma.	b − 8, M + 5, e + 7	6·2			
,, 27	5320	,,	,,	Wl.	b − 3, d + 6	5·7			
Nov. 9	5333	,,	,,	Ma.	b − 6, M + 5, e + 7	6·1	...	...	Date doubtful.
,, 11	5335	,,	2	Wl.	b − 4, M + 4	6·1			
,, 13	5337	,,	,,	Ma.	b − 7·5, M + 5, e + 7	6·1			
,, 15	5339	,,	,,	Wl.	b − 5, M + 3	6·2			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Jan. 13	5398	B.	2	Wl.	b−4, M+3	6·1			
Feb. 21	5437	,,	...	Ke.	b−1	5·7			
Mar. 3	5447	T.	2	Or.	...	*6·0*	...	...	Normal.
,, 12	5456	B.	...	Ke.	b−1	5·7	...	...	Normal.
,, 21	5465	,,	...	,,	b−1	5·7	...	...	,,
,, 28	5472	,,	...	,,	b−1	5·7			
Apr. 1	5476	,,	1	Or.	b−4	6·0			
,, 5	5480	,,	...	Ke.	b−1	5·7	...	...	Normal.
,, 8	5483	,,	,,	Or.	b−4, M+4	6·1			
,, 9	5484	,,	...	Ke.	b−1	5·7	...	...	Normal.
,, 10	5485	,,	1	Or.	b−4, M+4	6·1			
,, 10	5485	B.	1	Ch.	b−4, M+3	6·1			
,, 14	5489	,,	,,	,,	b−3, M+3	6·1			
,, 14	5489	,,	...	Ke.	b−1	5·7			
,, 15	5490	,,	1	Or.	b−4, M+4	6·1			
,, 16	5491	,,	...	Ke.	b−1	5·7			
,, 18	5493	,,	1	Ch.	M+3	6·3			
,, 19	5494	,,	,,	,,	M+3	6·3			
,, 19	5494	,,	...	Ke.	b−1	5·7			
,, 19	5494	,,	1	Or.	b−4, M+4	6·1			
,, 20	5495	,,	,,	,,	b−4, M+4	6·1			
,, 23	5498	,,	2	,,	b−5, M+3	6·2			
May 6	5511	,,	,,	,,	b−4, M+4	6·1			
,, 11	5516	,,	...	Ke.	b−1	5·7			
,, 11	5516	,,	1	Ma.	b−2, M+5, e+7	6·0			
,, 14	5519	,,	2	,,	b−1, M+7, e+8	5·8			
,, 14	5519	,,	1	Or.	b−4, M+4	6·1			
,, 16	5521	,,	2	Ma.	b−1·5, M+7, e+8	5·8			
,, 18	5523	,,	,,	,,	b−1·5, M+5, e+7	5·9			
,, 19	5524	,,	1	Ch.	M+3	6·3			
,, 20	5525	,,	2	Ma.	b−1·5, M+6, e+7	5·9			
,, 21	5526	,,	1	,,	b−1, M+6, e+8	5·9			
,, 22	5527	,,	...	Ke.	b−1	5·7			
,, 23	5528	,,	1	Ch.	M+4	6·2			
,, 25	5530	,,	2	Ma.	b−2·5, M+6, e+8	5·9			
June 10	5546	,,	1	Ch.	M+4	6·2			
,, 17	5553	,,	...	Ke.	b−1	5·7			
,, 23	5559	,,	1	Ch.	M+5	6·1			
,, 27	5563	,,	2	,,	M+5	6·1			
July 3	5569	,,	3	Ma.	b−2·5, M+6, e+8	5·9			
,, 7	5573	,,	...	Ke.	b−1	5·7			
,, 7	5573	,,	2	Ch.	M+5	6·1			
,, 15	5581	,,	,,	Ma.	b−4, M+4, e+6	6·1			
,, 16	5582	,,	,,	,,	b−3, M+6, e+8	5·9			
,, 16	5582	,,	1	Ch.	M+5	6·1			
,, 18	5584	,,	3	Ma.	b−3, M+6, e+8	5·9			
,, 21	5587	,,	1	,,	b−3	5·9			
,, 25	5591	,,	2	Pe.	M+3	6·3			
,, 26	5592	,,	,,	,,	b−7, M+4	6·2			
,, 28	5594	,,	,,	Ch.	M+5	6·1			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 2	5599	B.	2	Ma.	b−3, M+5, e+8	6·0			
,, 2	5599	,,	,,	Pe.	b−1, M+7	5·8			
,, 3	5600	,,	,,	,,	b−5, M+3	6·2			
,, 4	5601	,,	1	,,	b+1	5·5			
,, 4	5601	,,	3	Ma.	b−3, M+5, e+8	6·0			
,, 5	5602	,,	1	Pe.	R−9, b+1	5·2			
,, 6	5603	,,	,,	,,	R−8, b+2	5·1			
,, 6	5603	,,	,,	Ch.	M+5	6·1			
,, 7	5604	,,	,,	Pe.	S−1, b+3	5·5			
,, 8	5605	,,	1	Pe.	b+2	5·4			
,, 8	5605	,,	2	Ma.	b−2·5, M+6, e+7	5·9			
,, 10	5607	,,	,,	Pe.	b+2	5·4			
,, 11	5608	,,	,,	,,	b+2	5·4			
,, 12	5609	,,	,,	,,	b+1	5·5			
,, 12	5609	,,	...	Ke.	b−1	5·7			
,, 13	5610	,,	1	Pe.	b+2	5·4			
,, 14	5611	,,	2	,,	b+2	5·3			
,, 14	5611	,,	...	Ke.	b−1	5·7			
,, 15	5612	,,	1	Pe.	b+3	5·3			
,, 17	5614	,,	,,	,,	b−2	5·8			
,, 17	5614	,,	2	Ma.	b−2, M+7, e+9	5·8			
,, 18	5615	,,	1	Pe.	b−1	5·7			
,, 19	5616	,,	2	,,	b+1	5·5			
,, 19	5616	,,	3	Ma.	b−2, M+9, e+10	5·7			
,, 19	5616	,,	...	Ke.	b−1	5·7			
,, 20	5617	,,	...	,,	b−1	5·7			
,, 20	5617	,,	2	Pe.	b+2	5·4	...	...	Pale orange.
,, 20	5617	,,	1	Ma.	b−4, M+7, e+8	5·9			
,, 21	5618	,,	,,	Ch.	M+5	6·1			
,, 21	5618	,,	...	Ke.	b−1	5·7			
,, 21	5618	,,	1	Pe.	b+2	5·4			
,, 22	5619	,,	2	,,	b+2	5·4			
,, 22	5619	,,	...	Ke.	b−1	5·7			
,, 23	5620	,,	...	,,	b−1	5·7			
,, 23	5620	,,	3	Ma.	b−2·5, M+7, e+8	5·9			
,, 24	5621	,,	...	Ke.	b−1	5·7			
,, 25	5622	,,	2	Pe.	b+1	5·5			
,, 27	5624	,,	,,	,,	b−1	5·7			
,, 28	5625	,,	,,	,,	b−2	5·8			
,, 29	5626	,,	,,	,,	b−1	5·7			
,, 30	5627	,,	,,	,,	b−2	5·8			
Sept. 1	5629	,,	...	Ke.	b−1	5·7			
,, 2	5630	,,	2	Pe.	b−3	5·9			
,, 3	5631	,,	,,	Ma.	b−5, M+8, e+9	5·9			
,, 4	5632	,,	,,	Pe.	b−3, M+6	5·9			
,, 5	5633	,,	,,	,,	b−2, M+7	5·8			
,, 5	5633	,,	,,	Ma.	b−3, M+7, e+8	5·9			
,, 6	5634	,,	...	Ke.	b−1	5·7			
,, 7	5635	,,	1	Pe.	b+2	5·4			
,, 9	5637	,,	,,	Ch.	M+5	6·1			
,, 13	5641	,,	2	Pe.	b−1	5·7			
,, 14	5642	,,	1	,,	b−2	5·8			
,, 14	5642	N.E.	...	Ry.	=b	5·6			
,, 15	5643	B.	1	Ch.	M+5	6·1			
,, 16	5644	,,	...	Ke.	b−1	5·7			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Sept. 18	5646	B.	1	Pe.	b+2	5·4			
,, 18	5646	N.E.	...	Ry.	b+2	5·4			
,, 19	5647	B.	1	Pe.	b+2	5·4			
,, 21	5649	,,	2	,,	b+2	5·4			
,, 21	5649	N.E.	...	Ry.	b+2	5·4			
,, 22	5650	B.	2	Pe.	b+3	5·3			
,, 24	5652	,,	,,	,,	b+2	5·4			
Oct. 2	5660	,,	1	Ma.	b−6, M+5, e+6	6·1			
,, 2	5660	,,	...	Ke.	b−1	5·7			
,, 4	5662	T.	...	Ry.	=b	5·6			
,, 9	5667	B.	...	Ke.	b−1	5·7			
,, 18	5676	,,	...	,,	b−1	5·7			
,, 18	5676	,,	2	Ma.	b−6, M+7, e+8	6·0			
,, 31	5689	,,	...	Ke.	b−1	5·7			
Nov. 1	5690	,,	...	,,	b−1	5·7			
1902.									
Feb. 11	5792	N.E.	1	Ry.	b−2	5·8			
Mar. 21	5830	,,	2	,,	b−2	5·8			
Apr. 1	5841	,,	1	,,	=b	5·6			
,, 1	5841	B.	,,	Oa.	T−10	5·7			
,, 3	5843	,,	2	,,	T−10, =b	5·6			
,, 3	5843	,,	,,	Ch.	b−4, M+4	6·1			
,, 6	5846	,,	1	,,	b−5, M+4	6·1			
,, 8	5848	,,	2	Oa.	T−10, b−2	5·7			
,, 8	5848	N.E.	1	Ry.	=b	5·6			
,, 10	5850	,,	,,	,,	b−0·5	5·6			
,, 10	5850	B.	2	Oa.	T−9·5, b−1	5·7			
,, 18	5858	,,	,,	Ch.	b−5, M+3	6·2			
,, 23	5863	,,	1	,,	b−4, M+5	6·0			
,, 24	5864	,,	,,	,,	b−5, M+4	6·1			
,, 27	5867	,,	,,	,,	b−4, M+4	6·1			
,, 28	5868	,,	,,	,,	b−3, M+5	6·0			
,, 30	5870	,,	,,	,,	b−3, M+5	6·0			
May 2	5872	,,	,,	Ma.	=b, M+7, e+8	5·8			
,, 2	5872	,,	,,	Wl.	b−4, e+10	5·8			
,, 3	5873	,,	,,	,,	b−4, M+4	6·1			
,, 3	5873	N.E.	,,	Ry.	b+1	5·5			
,, 3	5873	B.	,,	Ma.	b−1, M+7, e+8	5·8			
,, 4	5874	,,	,,	,,	=b, M+9, e+10	5·7			
,, 4	5874	,,	2	Wl.	b−4, M+6	6·0			
,, 5	5875	,,	1	,,	b−5, M+3	6·2			
,, 5	5875	,,	,,	Ch.	b−3, M+5	6·0			
,, 6	5876	,,	,,	Wl.	b−4, M+5	6·0			
,, 7	5877	,,	,,	,,	b−5, M+3	6·2			
,, 7	5877	,,	,,	Ch.	b−2, M+5	5·9			
,, 7	5877	,,	,,	Ma.	=b, M+9, e+10	5·7			
,, 8	5878	,,	2	,,	=b, M+9, e+10	5·7			
,, 8	5878	,,	,,	Ch.	b−3, M+5	6·0			
,, 8	5878	,,	1	Wl.	b−4, M+6	6·0			
,, 9	5879	,,	,,	,,	b−5, M+6	6·0			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
May 10	5880	B.	1	Wl.	b − 5, M + 5	6·1			
,, 10	5880	,,	,,	Ma.	= b, M + 10, e + 9	5·7			
,, 11	5881	,,	,,	Wl.	b − 5, M + 5	6·1			
,, 12	5882	,,	,,	,,	b − 4, M + 3	6·1			
,, 12	5882	,,	,,	Ch.	b − 3, M + 5	6·0			
,, 13	5883	,,	3	Ma.	b − 1·5, M + 8, e − 10	5·7			
,, 13	5883	,,	1	Wl.	b − 5, M + 4	6·1			
,, 14	5884	,,	2	,,	b − 3, M + 6	5·9			
,, 15	5885	,,	,,	,,	b − 4, M + 4	6·1			
,, 17	5887	,,	,,	,,	b − 4, M + 3	6·1			
,, 23	5893	,,	,,	,,	b − 5, M + 5	6·1			
,, 24	5894	,,	2	Ma.	b − 2, M + 8, e + 10	5·8			
,, 25	5895	,,	3	Ch.	b − 2, M + 3	6·0			
,, 25	5895	,,	2	Wl.	b − 6, M + 4	6·2			
,, 26	5896	,,	,,	,,	b − 6, M + 4	6·2			
,, 26	5896	,,	1	Ch.	b − 3, M + 4	6·0			
,, 26	5896	,,	,,	Ma.	= b, M + 8, e + 10	5·7			
,, 27	5897	,,	,,	Ch.	b − 3, M + 4	6·0			
,, 27	5897	N.E.	,,	Ry.	b − 1	5·7			
,, 27	5897	B.	,,	Wl.	b − 4, M + 6	6·0			
,, 28	5898	,,	,,	,,	b − 5, M + 4	6·1			
,, 31	5901	,,	,,	,,	b − 5, M + 2	6·2			
June 1	5902	N.E.	...	Ry.	= b	5·6			
,, 4	5905	B.	1	Ma.	= b, M + 8, e + 10	5·7			
,, 24	5925	,,	2	,,	b − 2, M + 8, e + 9	5·8			
,, 26	5927	,,	1	,,	b − 2, M + 8, e + 10	5·8			
,, 26	5927	,,	,,	Ch.	b − 3, M + 4	6·0			
,, 29	5930	,,	,,	,,	b − 3, M + 4	6·0			
July 1	5932	,,	,,	Oa.	b − 1	5·7			
,, 2	5933	,,	,,	Ch.	b − 3, M + 5	6·0			
,, 3	5934	,,	,,	Ma.	b − 2, M + 7, e + 8	5·9			
,, 6	5937	,,	,,	,,	b − 2, M + 8, e + 9	5·8			
,, 7	5938	N.E.	,,	Ry.	= b	5·6			
,, 8	5939	B.	2	Oa.	= b	5·6			
,, 9	5940	,,	,,	Ma.	b − 2	5·8			
,, 11	5942	,,	1	,,	b − 2, M + 8, e + 9	5·8			
,, 11	5942	,,	2	Oa	b − 1·5	5·7			
,, 18	5949	,,	3	Ma.	b − 2, M + 8, e + 10	5·8			
,, 27	5958	,,	1	,,	= b, M + 7, e + 9	5·8			
,, 28	5959	,,	,,	Pe.	b + 2	5·4			
,, 29	5960	,,	,,	,,	b + 1	5·5			
Aug. 1	5963	,,	,,	Ma.	b − 1, M + 8, e + 9	5·8			
,, 14	5976	,,	2	,,	b − 3·5, M + 8, e + 8	5·9			
,, 19	5981	,,	,,	,,	b − 1	5·7			
,, 25	5987	,,	1	,,	b − 2, M + 7, e + 9	5·8			
,, 25	5987	,,	2	Oa.	b + 1·5	5·4			
,, 29	5991	,,	,,	,,	b + 0·5	5·6			
Sept. 1	5994	,,	,,	,,	b + 1·5	5·4			
,, 6	5999	,,	1	Pe.	L − 3, b + 1	5·6			
,, 23	6016	,,	3	Ma.	...	...	...	...	Much < 5·6.
,, 25	6018	,,	1	,,	b − 2, M + 7, e + 8	5·9			
,, 26	6019	,,	,,	,,	b − 2, M + 7, e + 8	5·9			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Oct. 7	6030	B.	2	Ma.	b−2, M+7, e+8	5·9			
,, 25	6048	,,	,,	,,	b−2	5·8			
,, 26	6049	,,	,,	,,	b−1, M+8, e+9	5·8			
Nov. 4	6058	,,	1	,,	b−2·5, M+8, e+8	5·8			
,, 18	6072	,,	2	,,	b−2	5·8			
1903.									
Mar. 16	6190	,,	...	Co.	...	...	...	...	Faint.
,, 22	6196	,,	...	,,	...	...	...	...	,,
,, 28	6202	T.	...	,,	f−8	8·0			
,, 30	6204	B.	...	,,	...	...	...	...	Invisible < 8·0.
Apr. 2	6207	T.	...	,,	f−6	7·8			
,, 8	6213	,,	..	,,	=f	7·2			
,, 11	6216	,,	...	,,	f+4	6·8			
,, 11	6216	B.	1	Ma.	f+1·5	7·0			
,, 14	6219	,,	,,	Pe.	...	...	...	...	Invisible.
,, 23	6228	,,	,,	Wl.	e−5, f+3	7·1			
,, 24	6229	T.	...	Co.	=f	7·2			
,, 29	6234	B.	1	Pe.	...	...	..	...	Invisible.
May 2	6237	T.	,,	,,	f+2	7·0			
,, 2	6237	B.	,,	Wl.	f−2, h+5	7·4			
,, 3	6238	,,	,,	,,	f−2, h+5	7·4			
,, 15	6250	T.	...	Co.	...	*7·0*			
,, 20	6255	B.	1	Ma.	f+7·5	6·4			
,, 21	6256	,,	,,	,,	f+4·5	6·7			
,, 23	6258	,,	,,	,,	M−8, f+6	7·0			
,, 24	6259	,,	,,	,,	f+5	6·7			
,, 24	6259	,,	,,	Or.	M−5, f+5	6·9			
,, 24	6259	T.	...	Co.	...	*6·5*			
,, 24	6259	B.	1	Pe.	M−7, f+4	7·0			
,, 25	6260	,,	,,	Or.	M−5, f+5	6·9			
,, 30	6265	,,	,,	Wl.	f−2, h+4	7·5			
,, 31	6266	,,	,,	,,	M−5, f+2	7·0			
,, 31	6266	,,	,,	Ma.	f+1	7·1			
,, 31	6266	T.	2	Or.	=f	7·2	...	...	About.
June 3	6269	B.	1	Ma.	f+3	6·9			
,, 4	6270	,,	,,	,,	f+1	7·1			
,, 13	6279	,,	,,	Wl.	f−4, h+2	7·7			
,, 14	6280	,,	,,	,,	f−4, h+2	7·7			
,, 16	6282	,,	,,	,,	f−5, h+2	7·7			
,, 17	6283	,,	,,	,,	h−3	8·2			
,, 20	6286	,,	,,	,,	h−5	8·4			
,, 21	6287	T.	...	Co.	...	*6·5*	...	...	*
,, 23	6289	B.	1	Wl.	h−6	8·5			
,, 27	6293	,,	,,	Ma.	f−10	8·2			
,, 30	6296	,,	2	Or.	f−6	7·8	...	...	*
July 1	6297	,,	,,	Ma.	f−10	8·2			
,, 13	6309	B.	1	,,	f+1·5	7·0			
,, 18	6314	,,	,,	,,	f+1	7·1			
,, 23	6319	T.	...	Co.	...	*6·0*	...	...	*
,, 24	6320	B.	2	Ma.	f+3·5	6·8			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
July 26	6322	B.	1	Ma.	M − 10, f + 2	7·3			
Aug. 10	6337	,,	2	Pe.	...	...	...	...	Invisible < 6·6.
,, 11	6338	,,	,,	,,	= M	6 6			
,, 13	6340	,,	1	,,	M + 2	6·4			
,, 14	6341	,,	,,	Or.	= M	6·6			
,, 18	6345	,,	,,	Ma.	M − 3, e + 1	6·7			
,, 21	6348	,,	,,	,,	M − 3, e − 2	6·9			
,, 21	6348	,,	,,	Or.	= M	6·6			
,, 25	6352	T.	...	Co.	..	*6·5*			
Sept. 11	6369	B.	1	Ma.	M − 5, e − 2	7·0			
,, 12	6270	T.	...	Co.	...	*6·5*			
,, 18	6376	,,	..	,,	f + 4	6·8			
,, 26	6384	B.	1	Or.	= M	6·6			
Oct. 12	6400	T.	...	Co.	M + 2	6·8			
,, 12	6400	B.	1	Ma.	M + 2, = e	6·5			
,, 21	6409	,,	,,	,,	= M, e + 1	6·6			
,, 30	6418	,,	2	,,	= M, = e	6·6			
Nov. 14	6433	,,	1	,,	b − 7·5, M + 6, e + 6	6·1			
,, 14	6433	T.	...	Co.	...	*6·5*			
1904.									
Mar. 10	6550	B.	1	Ma.	b − 6, M − 1, e + 1	6·5			
,, 21	6561	T.	...	Co.	...	*6·3*			
Apr. 6	6577	B.	1	Ma.	b − 6, M + 5, e + 4	6·2			
,, 6	6577	,,	2	Or.	...	*6·0*	..	...	Normal.
,, 8	6579	,,	1	Oa.	b − 3	5·9			
,, 9	6580	,,	,,	,,	b − 5	6·1			
,, 9	6580	,,	1	Ma.	b − 6, M + 3, e + 4	6·3			
,, 15	6586	,,	,,	Or.	...	*6·0*	...	...	Normal.
,, 20	6591	,,	2	Ma.	b − 3, M + 5, e + 7	6·0			
May 2	6603	,,	,,	,,	b − 4, M + 7, e + 8	5·9			
,, 2	6603	,,	1	Oa.	= b	5·6			
,, 7	6608	,,	,,	Ch.	b − 3, M + 7	5·9			
,, 8	6609	,,	,,	,,	b − 5, M + 5	6·1			
,, 16	6617	,,	2	Oa.	b − 2	5·8			
,, 18	6619	,,	1	Ma.	b − 5, M + 6, e + 9	6·0			
,, 18	6619	,,	2	Oa.	b + 1	5·5			
,, 19	6620	,,	,,	,,	b + 1	5·5			
June 3	6635	,,	1	,,	b + 1	5·5			
,, 5	6637	,,	,,	Ma.	b − 3, M + 6, e + 8	5·9			
,, 17	6649	,,	,,	Oa.	b − 5	6·1			
,, 20	6652	,,	,,	,,	b − 5·5	6·1			
,, 22	6654	,,	2	Ma	b − 4, M + 8, e + 10	5·8			
,, 29	6661	,,	1	Oa.	b − 9	6·5			
July 1	6663	,,	,,	Or.	b − 5, M + 5	6·1			
,, 3	6665	,,	2	Ma.	b − 5, M + 5, e + 5	6·1			
,, 8	6670	,,	1	,,	b − 5, M + 5, e + 8	6·0			
,, 8	6670	B.	1	Oa.	b - 8	6·4			

(5667) R CORONÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
July 12	6674	B.	1	Ma.	b - 10, M + 4, e + 6	6·3			
,, 13	6675	,,	,,	,,	b - 7, M + 6, e + 8	6·1			
,, 15	6677	,,	,,	,,	b - 6, M + 5, e + 7	6·1			
,, 16	6678	,,	,,	,,	b - 7·5, M + 4, e + 7	6·2			
,, 16	6678	,,	2	Or.	b - 5, M + 5	6·1			
,, 20	6682	,,	1	,,	b - 5, M + 5	6·1			
,, 28	6690	,,	3	Oa.	b - 2	5·8			
Aug. 1	6694	,,	1	,,	b - 4·5	6·0			
,, 1	6694	,,	,,	Ma.	b - 7·5, M + 6, e + 8	6·1			
,, 2	6695	,,	,,	Or.	b - 5, M + 5	6·1			
,, 6	6699	,,	2	,,	b - 5, M + 5	6·1			
,, 9	6702	,,	,,	Ma.	M + 5, e + 7	6·0			
,, 11	6704	,,	,,	Oa.	b - 7	6·3			
,, 12	6705	,,	1	Ma.	b - 5, M + 8, e + 9	5·9			
,, 12	6705	,,	,,	Oa.	b - 4	6·0			
,, 14	6707	,,	,,	Ma.	b - 6, M + 6, e + 8	6·0			
,, 15	6708	,,	,,	Oa.	b - 7	6·3			
,, 17	6710	,,	,,	Ma.	b - 7, M + 6, e + 7	6·1			
,, 27	6720	,,	,,	Ch.	b - 8, M + 2	6·4			
,, 28	6721	,,	2	Ma.	b - 5, M + 6, e + 7	6·0			
,, 28	6721	,,	,,	Co.	...	*6·0*			
,, 29	6722	,,	1	Ma.	b - 6, M + 5, e + 6	6·1			
,, 30	6723	,,	,,	,,	b - 7·5, M + 6, e + 7	6·1			
Sept. 3	6727	,,	,,	,,	b - 8, M + 5, e + 6	6·2			
,, 3	6727	,,	,,	Or.	b - 5, M + 3	6·2			
,, 3	6727	T.	...	Co.	...	*6·0*			
,, 6	6730	B.	1	Ch.	b - 8, M + 2	6·4			
,, 14	6738	,,	,,	Ma.	b - 10, M + 4, e + 5	6·3			
,, 16	6740	,,	2	,,	b - 14, M + 4, e + 5	6·5			
,, 29	6753	,,	,,	,,	= M	6·6			
Oct. 3	6757	,,	,,	,,	M - 2·5, e - 2·5	6·9			
,, 3	6757	T.	,,	Co.	...	*6·3*			
,, 7	6761	,,	1	,,	...	*7·0*			
,, 11	6765	B.	,,	Ma.	M - 5, e - 6, f + 2	7·1			
,, 13	6767	,,	,,	,,	f + 1·5	7·0			
,, 14	6768	,,	2	,,	f + 2·5	6·9			
,, 29	6783	,,	1	,,	M - 1	6·7			
,, 29	6783	T.	...	Co.	...	*6·5*			
Nov. 3	6788	B.	2	Ma.	b - 10, M + 4·5, e + 4·5	6·3			
,, 12	6797	,,	,,	,,	b - 7·5, M + 5, e + 5	6·2			
,, 12	6797	,,	1	Or.	b - 5, M + 5	6·1			
,, 13	6798	,,	2	,,	b - 5, M + 5	6·1			
,, 14	6799	,,	1	Ma.	b - 7, M + 4, e + 5	6·2			

(5677) R SERPENTIS.

NOTES.

Star F = v Serpentis, 5·74 m. P.D.M.
,, N = ϕ ,, 5·74 ,, ,,
,, C = D.M. + 16° 2840, 6·14 ,, ,,
,, 6 and 8 of Hagen, combined 8·50 ,, (say).

Data for mean curve:—Period, 357 d. $M - m$, 151 d. Variation, 6·5 m. to 13.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
July 14	4850	B.	2	Ma.	...	...	8·8	...	Invisible.
Aug. 10	4877	T.28	1	,,	...	*9·3*	7·5	+1·8	Estimated.
1900.									
Apr. 28	5138	,,	,,	,,	...	...	12·7	...	Invisible.
June 26	5197	,,	2	,,	...	*10·5*	9·4	1·1	About.
July 2	5203	,,	,,	,,	9 − 2	10·2	9·1	+1·1	
,, 24	5225	B.	1	Or.	= 4	7·5	7·9	− ·4	
,, 25	5226	,,	,,	,,	= 3	7·4	7·8	·4	
,, 27	5228	,,	2	,,	= 3	7·4	7·7	·3	About.
,, 28	5229	,,	1	,,	C − 6, 3 + 6	6·8	7·7	·9	
,, 30	5231	,,	,,	,,	C − 6, 3 + 6	6·8	7·6	·8	
,, 30	5231	,,	,,	Ma.	C − 2	6·3	7·6	1·3	
Aug. 1	5233	,,	,,	Or.	C − 2	6·3	7·5	1·2	
,, 4	5236	,,	2	,,	C + 2	5·9	7·4	1·5	
,, 5	5237	,,	1	,,	F − 2, C + 2	5·9	7·3	1·4	
,, 13	5245	,,	3	Ma.	N − 3	6·0	7·1	1·1	
,, 15	5247	,,	1	,,	N − 2·5, C + 8	5·7	7·0	1·3	
,, 15	5247	,,	2	Or.	F − 1, C + 3	5·8	7·0	1·2	
,, 17	5249	,,	2	Ma.	N − 2	5·9	6·9	1·0	Yellowish white.
,, 18	5250	,,	1	,,	N − 2, C + 7	5·7	6·9	1·2	
,, 18	5250	,,	2	Or.	F − 2, C + 2	5·9	6·9	1·0	
,, 22	5254	,,	,,	,,	F − 2, C + 2	5·9	6·8	·9	
,, 22	5254	,,	1	Ma.	N − 2, C + 2	5·9	6·8	·9	
,, 24	5256	,,	,,	,,	N − 2, C + 3	5·9	6·7	·8	
,, 24	5256	,,	,,	Or.	F − 2, C + 2	5·9	6·7	·8	
,, 25	5257	,,	,,	Ma.	N − 3, C + 4	5·9	6·7	·8	
,, 26	5258	,,	,,	,,	N − 3, C + 3	5·9	6·7	·8	
,, 30	5262	,,	2	,,	N − 3, C + 3	5·9	6·6	·7	
Sept. 2	5265	,,	,,	,,	N − 6, = C	6·2	6·6	·4	
,, 2	5265	,,	,,	Or.	= C	6·1	6·6	·5	
,, 4	5267	,,	3	,,	F − 3, C + 1	6·0	6·5	·5	
,, 11	5274	,,	2	,,	C − 3	6·4	6·5	·1	
,, 12	5275	,,	,,	Ma.	C − 3	6·4	6·5	− ·1	
,, 14	5277	,,	1	,,	C − 4, 3 + 4	6·8	6·5	+ ·3	
,, 28	5291	T.28	,,	,,	3 − 3	7·7	6·7	1·0	
Oct. 11	5304	B.	,,	Or.	...	...	6·8	...	Invisible.

(5677) R SERPENTIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Oct. 12	5305	B.	1	Ma.	...	...	6·9	...	Glimpsed.
,, 21	5314	T.	,,	Or.	=4	7·5	7·0	·5	Doubtful obs.
1901.									
May 22	5527	T.28	2	Ma.	...	...	11·5	...	Invisible.
July 3	5569	,,	3	,,	5−5, 10−5	9·8	8·7	1·1	*
,, 15	5581	,,	2	,,	(6+8)+2	8·3	8·0	+ ·3	
,, 16	5582	,,	,,	,,	3−5	7·9	8·0	− ·1	
,, 18	5584	,,	3	,,	3−3	7·7	7·9	·2	
,, 21	5587	B.	1	,,	=4	7·5	7·8	·3	
Aug. 2	5599	T.28	2	,,	4+4·5	7·0	7·2	− ·2	
,, 4	5601	B.	3	,,	3+1	7·3	7·2	+ ·1	
,, 6	5603	T.28	2	,,	4+4	7·1	7·1	0	
,, 7	5604	T.30	1	Ch.	3+4	7·0	7·1	− ·1	
,, 8	5605	,,	,,	,,	3+5	6·9	7·1	− ·2	
,, 8	5605	T.28	2	Ma.	4+3·5	7·1	7·1	0	
,, 10	5607	,,	,,	,,	4+5	7·0	7·0	0	
,, 12	5609	B.	...	Ke.	C−6, 3+4, 4+4	7·0	6·9	+ ·1	
,, 13	5610	T.30	1	Ch.	3+5	6·9	6·9	0	
,, 14	5611	B.	...	Ke.	C−5, 3+4	6·8	6·9	− ·1	
,, 17	5614	T.28	1	Ma.	3+2·5	7·2	6·8	+ ·4	
,, 17	5614	T.30	,,	Ch.	3+4	7·0	6·8	·2	
,, 19	5616	B.	...	Ke.	C−6, 3+6	6·8	6·7	·1	
,, 20	5617	,,	...	,,	C−6, 3+6	6·8	6·7	·1	
,, 20	5617	T.28	1	Ma.	3+4	7·0	6·7	+ ·3	
,, 21	5618	B.	...	Ke.	C−5, 3+7	6·7	6·7	0	
,, 22	5619	,,	...	,,	C−5, 3+7	6·7	6·7	0	
,, 23	5620	,,	...	,,	C−7, 3+5	6·9	6·7	+ ·2	
,, 23	5620	T.28	3	Ma.	3+2·5	7·2	6·7	+ ·5	
,, 24	5621	B.	...	Ke.	C−5	6·6	6·6	0	
Sept. 3	5631	T.28	3	Ma.	3+2, 4+1	7·3	6·5	·8	
,, 4	5632	B.	...	Ke.	C−7·5, =3	7·2	6·5	·7	
,, 5	5633	T.30	2	Ch.	=3, 4+1	7·4	6·5	·9	
,, 16	5644	B.	...	Ke.	3−2, 4+2	7·5	6·6	·9	
,, 18	5646	T.30	1	Ch.	3−4, 4−6	8·0	6·6	1·4	
,, 20	5648	B.	..	Ke.	4+2	7·3	6·6	·7	
Oct. 2	5660	T.28	2	Ma.	3−6, 5+3	8·1	6·8	1·3	
,, 3	5661	T.60	2	Ch.	3−8, 5+4, 6+10	8·0	6·8	1·2	Very red.
,, 4	5662	B.	...	Ke.	3−6, 4−2	7·9	6·8	1·1	
,, 5	5663	,,	...	,,	...	...	6·8	...	Glimpsed.
,, 7	5665	T.30	2	Ch.	5+3, 6+5	8·3	6·9	1·4	
,, 9	5667	B.	...	Ke.	...	...	6·9	...	Invisible.
1902.									
Apr. 18	5858	T.95	3	Ch.	...	...	12·7	...	<12·1.
,, 27	5867	,,	,,	,,	20−6, 22+3	12·6	12·4	+ ·2	
May 3	5873	T.28	1	Ma.	...	...	12·2	...	<11·6. Invisible.
,, 7	5877	T.	...	Co.	...	...	12·0	...	Invisible.
,, 8	5878	T.95	1	Ch.	15−3, 17−1, =18	11·8	12·0	− ·2	
,, 10	5880	T.28	,,	Ma.	...	...	11·8	...	Invisible.
,, 24	5894	,,	2	,,	13+1·5	10·7	10·9	·2	

(5677) R SERPENTIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
May 25	5895	T.28	2	Ma.	10−1	10·4	10·9	·5	
,, 25	5895	T.95	1	Ch.	=7, 9+3	9·5	10·9	1·4	
,, 27	5897	,,	,,	,,	5−4, 12+3, 9+2	9·7	10·7	1·0	
June 7	5908	T.	...	Co.	...	*9·5*	9·9	·4	
,, 24	5925	T.28	2	Ma.	5+3, (6+8)+2	8·2	8·9	·7	
,, 26	5927	,,	,,	,,	5+2, (6+8)+1	8·3	8·8	·5	
,, 28	5929	T.	...	Co.	...	*7·8*	8·7	·9	
July 3	5934	T.28	1	Ma.	3−4	7·8	8·8	1·0	
,, 6	5937	B.	2	,,	3+1	7·3	8·2	·9	
,, 7	5938	,,	,,	,,	3+2·5	7·2	8·1	·9	
,, 11	5942	,,	,,	,,	3+4·5	7·0	7·9	·9	
,, 18	5949	,,	1	,,	3+6·5	6·8	7·6	·8	
,, 23	5954	,,	3	,,	C−1	6·2	7·4	1·2	
,, 27	5958	,,	1	,,	C+1·5	6·0	7·3	1·3	
Aug. 1	5963	,,	,,	,,	C−2	6·3	7·1	− ·8	
,, 14	5976	,,	2	,,	C−1	6·2	6·7	− ·5	
,, 24	5986	T.	...	Co.	...	*7·0*	6·5	+ ·5	
,, 25	5987	T.28	2	Ma.	C−3	6·4	6·5	− ·1	
Sept. 7	6000	T.	...	Co.	...	*8·0*	6·6	+1·4	
,, 21	6014	,,	...	,,	...	*7·5*	6·7	·8	
Oct. 21	6044	,,	...	,,	...	*8·8*	7·3	1·5	
Nov. 7	6061	,,	...	,,	....	*9·0*	7·7	1·3	
1903.									
Mar. 5	6179	,,	...	,,	...	...	12·7	...	Invis. < 13·0 Mag.
,, 28	6202	,,	...	,,	...	...	13·0	...	,, ,,
Apr. 11	6216	,,	...	,,	...	*13·0?*	12·8	·2	Perhaps just seen.
,, 24	6229	,,	...	,,	...	...	12·4	...	Invisible.
May 15	6250	,,	...	,,	...	*11·5*	11·2	·3	Doubtful.
,, 24	6259	,,	...	,,	...	*11·8*	10·6	1·2	,,
June 21	6287	,,	...	,,	10−5	10·8	8·8	+2·0	
,, 27	6293	T.	...	Or.	...	...	8·4	...	Invisible < 9·0 Mag.
July 18	6314	B.	1	Ma.	...	...	7·4	...	Invisible.
,, 23	6319	,,	...	Co.	3+3	7·1	7·2	− ·1	
,, 24	6320	B.	,,	Ma.	4−2	7·7	7·2	+ ·5	
,, 26	6322	,,	,,	,,	4−2·5	7·7	7·1	·6	
Aug. 21	6348	,,	,,	,,	...	...	6·5	...	Suspected.
,, 21	6348	T.	,,	Or.	3−5, 5+5	7·9	6·5	1·4	
,, 25	6352	T.28	,,	Ma.	3−3·5, 5+7	7·7	6·5	1·2	
,, 25	6352	T.	...	Co.	3+3	7·1	6·5	·6	
Sept. 11	6369	B.	1	Ma.	...	...	6·6	...	Invisible.
,, 12	6370	T.	...	Co.	3−4	7·8	6·7	1·1	
,, 18	6376	,,	...	,,	3−7	8·1	6·8	1·3	
,, 25	6383	,,	...	,,	3−7	8·1	6·8	1·3	

(5677) R SERPENTIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Nov. 14	6433	T.	3	Co.	...	*10·0*	8·1	+1·9	Doubtful.
1904.									
Apr. 6	6577	,,	...	,,	...	...	12·7	...	Invisible.
May 2	6603	T.28	1	Ma.	...	...	11·7	...	,,
,, 18	6619	,,	,,	,,	5−6, 7+2	9·0	10·6	−1·6	
,, 18	6619	T.	...	Co.	3−2	7·6	10·6	3·0	
June 3	6635	T.28	1	Ma.	=(6+8)	8·5	9·5	1·0	
,, 5	6637	,,	,,	,,	5+2	8·2	9·4	1·2	
,, 6	6638	T.	...	Co.	3+3	7·1	9·3	2·2	
,, 7	6639	T.28	1	Ma.	(6+8)+5	8·0	9·2	1·2	
,, 22	6654	,,	,,	,,	3+7	6·7	8·8	2·1	
,, 28	6660	B.	,,	,,	C+2	5·9	8·0	2·1	
July 1	6663	,,	,,	Or.	C+3	5·8	7·9	2·1	
,, 5	6667	T.	...	Co.	=C	6·1	7·7	1·6	
,, 8	6670	B.	1	Ma.	C+2	5·9	7·6	1·7	
,, 11	6673	,,	,,	Or.	C−4	6·5	7·5	1·0	
,, 12	6674	T.	...	Co.	C+3	5·8	7·4	1·6	
,, 12	6674	B.	1	Ma.	N−3, C+1	6·0	7·4	1·4	
,, 13	6675	,,	,,	,,	N−5, C+2	6·1	7·4	1·3	
,, 15	6677	,,	,,	,,	N−4, C+3	6·0	7·3	1·3	
,, 16	6678	,,	,,	,,	N−4·5, C+2	6·1	7·3	1·2	
,, 16	6678	,,	,,	Or.	C+4	5·7	7·3	−1·6	
,, 20	6682	,,	,,	Ma.	N−5, C+2·5	6·1	7·1	−1·0	
Aug. 1	6694	,,	,,	,,	N−7, C+2	6·2	6·8	·6	
,, 2	6695	T.	...	Co.	C−3	6·4	6·7	·3	
,, 2	6695	B.	1	Or.	C+3	5·8	6·7	·9	*
,, 6	6699	,,	,,	,,	C−3	6·4	6·7	·3	*
,, 6	6699	,,	,,	Ma.	N−7, C+3	6·1	6·7	·6	
,, 8	6701	,,	,,	,,	=C	6·1	6·6	·5	
,, 12	6705	,,	,,	,,	C−1	6·2	6·6	·4	
,, 14	6707	,,	,,	,,	N−7·5, C−1	6·4	6·5	−·1	
,, 14	6707	T.	...	Co.	C−5	6·6	6·5	+·1	
,, 15	6708	B.	1	Ma.	C−4, 3+4	6·8	6·5	+·3	
,, 17	6710	,,	,,	,,	C−2	6·3	6·5	−·2	
,, 18	6711	,,	2	,,	C−2·5	6·4	6·5	−·1	
,, 28	6721	T.28	1	,,	4+2·5	7·2	6·6	+·6	
,, 28	6721	T.	2	Co.	4+3	7·2	6·6	+·6	
,, 28	6721	B.	2	Or.	C−3	6·4	6·6	−·2	
,, 29	6722	T.28	1	Ma.	4+2	7·3	6·6	+·7	
,, 30	6723	,,	,,	,,	4+2·5	7·2	6·6	·6	
Sept. 3	6727	,,	,,	,,	4+1	7·4	6·6	·8	
,, 14	6738	,,	,,	,,	3−3, 5+6	7·8	6·8	1·0	
,, 16	6740	,,	,,	,,	3−9, (6+8)+3	8·3	6·8	1·5	
Oct. 7	6761	T.	2	Co.	5−6, 8+6	9·1	7·2	1·9	
,, 29	6783	,,	,,	,,	7−2	9·5	7·8	1·7	
,, 29	6783	T.28	1	Ma.	7−2	9·5	7·8	+1·7	

(5758) X HERCULIS.

NOTES.

		P.D.M.
Star *a* =	D.M. + 47° 2288	7·40 m.
„ *b* =	„ + 47° 2300	6·58 „
„ *c* =	„ + 47° 2313	7·66 „
„ *d* =	„ + 50° 2257	6·96 „
„ *e* =	„ + 49° 2469	7·50 „
„ *f* =	„ + 49° 2461	7·61 „

The "Deduced Mag." column and two following ones have not been completed as the observations of the Section when taken together, and employed in comparison with (1) stars *a* and *b* combined, (2) with *a* alone, and (3) with *b* alone, do not support the light curve derived from the data of Chandler and H.C.O., viz. :—Period, 93·5 d.; $M-m$, 60 d.; and Variation, 5·9 m. to 7·2 m.

The observations of the Director, when taken alone (using star *a* only), possibly indicate a tendency to a period of some such length for 1899; but this is not apparent in the other seasons.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Apr. 30	4775	.	1	Ma.	a+7, b−1				
May 2	4777	„	„	„	a+7, b−2				
„ 3	4778	„	2	„	a+7, b−2				
„ 4	4779	„	1	„	a+8, b−1				
„ 5	4780	„	„	„	a+8, b−2				
„ 6	4781	„	3	„	a+6, b−3				
„ 7	4782	„	1	„	a+7, b−2·5				
„ 8	4783	„	2	„	a+6, b−3				
„ 27	4802	„	„	„	a+3, b−7				
„ 28	4803	„	„	„	a+1·5, b−6				
„ 29	4804	„	3	„	a+2, b−6				
„ 30	4805	„	2	„	a+2, b−6				
„ 31	4806	„	„	„	a+3, b−6				
June 2	4808	„	„	„	a+2, b−7				
„ 3	4809	„	„	„	a+2, b−6				
„ 8	4814	„	„	„	a+4, b−5				
„ 9	4815	„	„	„	a+4, b−4				
„ 29	4835	„	„	„	a+7, b+3				
July 8	4844	„	„	„	a+8, b+2				
„ 14	4850	„	„	„	a+8, b+4				
„ 16	4852	„	„	„	a+8, b+3				
„ 27	4863	„	„	„	a+9, b+6				
„ 29	4865	„	1	„	a+8, b+6				
„ 31	4867	„	„	„	a+6, b+4				
Aug. 2	4869	„	„	„	a+8, b+4				
„ 10	4877	„	„	„	a+6, b+4				
„ 23	4890	„	2	„	a+6, b+3				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Aug. 24	4891	B.	2	Ma.	a+5, b+3				
,, 31	4898	,,	1	,,	a+3, b+1				
Sept. 2	4900	,,	,,	,,	a+1, b−3				
,, 3	4901	,,	,,	,,	a+1, b−2				
,, 4	4902	,,	,,	,,	a+1, b−3				
,, 11	4909	,,	,,	,,	a+1, b−4				
Oct. 31	4959	,,	2	,,	a+3, b+5				
1900.									
Mar. 20	5099	T. 15	1	Ki.	a+5, b−5	...	...	...	Rather doubtful.
,, 28	5107	,,	,,	,,	a+2·5, b−3	...	...	...	Orange.
,, 29	5108	,,	2	,,	a+3·5, b−5				
,, 29	5108	B.	1	Ke.	a+2, b−3				
,, 31	5110	,,	,,	,,	a+2, b−3				
Apr. 2	5112	,,	2	,,	a+2				
,, 5	5115	,,	1	,,	a+4, b−4	...	..	...	Reddish.
,, 7	5117	,,	,,	,,	a+4, b−4	...	...	...	,,
,, 11	5121	,,	,,	,,	a+4 b−4	...	...	...	,,
,, 16	5126	,,	2	Ma.	a+5, b−5				
,, 17	5127	,,	1	,,	a+5, b−5				
,, 17	5127	T. 15	2	Ki.	a+7, b+2	...	...	...	Yellow.
,, 18	5128	B.	,,	Ma.	a+5, b−5				
,, 19	5129	,,	1	Ke.	a+3, b−2	...	...	...	Reddish.
,, 19	5129	F.	,,	Wl.	b+1				
,, 20	5130	,,	,,	,,	b+2				
,, 20	5130	B.	,,	Or.	...	...	...	...	Much > a or b about 6·0.
,, 21	5131	F.	,,	Wl.	b+2				
,, 21	5131	B.	3	Ma.	a+4, b−5				
,, 25	5135	T. 15	1	Ki.	a+9, b+4·5				
,, 26	5136	B.	,,	Ma.	a+6, b−4	...	...	...	Much > a, decidedly 7 b.
,, 26	5136	,,	,,	Or.	...	...	...	...	*>6·0.*
,, 28	5138	,,	,,	Ma.	a+6, b−3				
,, 30	5140	,,	,,	Ke.	a+3·5, b−1·5	...	...	...	Reddish.
May 2	5142	T. 15	1	Ki.	a+10, b+5·5				
,, 2	5142	B.	,,	Wl.	b+2				
,, 3	5143	,,	2	Or.	..	...	...	...	*6·0*±.
,, 3	5143	T. 15	,,	Ki.	a+11, b+5				
,, 7	5147	B.	,,	Ke.	a+4, b−1				
,, 7	5147	B.	2	Wl.	b+3				
,, 10	5150	T. 15	,,	Ki.	a+11·5, b+6·5	...	...	...	Full yellow.
,, 13	5153	,,	,,	,,	a+12, b+6	...	...	...	,, ,,
,, 15	5155	B.	,,	Or.	...	...	...	...	*6·0*±.
,, 15	5155	,,	,,	Ke.	a+3, b−2				
,, 16	5156	,,	,,	,,	a+3·5, b−1·5				
,, 17	5157	,,	3	Ma.	a+6, b−4				
,, 17	5157	,,	2	Wl.	b+3				
,, 18	5158	,,	,,	Ke.	a+3, b−2				
,, 19	5159	T. 15	1	Ki.	a+11, b+5				
,, 20	5160	,,	3	,,	a+12, b+5				
,, 23	5163	B.	1	Ke.	a+3, b−2				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
May 26	5166	B.	1	Wl.	a+4, b−1				
,, 28	5168	,,	2	,,	b+1				
,, 29	5169	,,	1	Ke.	a+3, b−2				
,, 30	5170	,,	2	Wl.	b+1				
June 1	5172	,,	1	Ke.	a+3, b−2				
,, 3	5174	,,	2	,,	a+3, b−2				
,, 26	5197	,,	,,	,,	a+2·5, b−2·5				
,, 26	5197	,,	1	Wl.	b+2				
,, 26	5197	,,	2	Ma.	a+5, b−1				
July 2	5203	,,	,,	,,	a+4, b−3				
,, 3	5204	,,	,,	,,	a+6, b+2				
,, 6	5207	,,	1	Ke.	a+6, b+2				
,, 7	5208	,,	,,	,,	a+6, b+2				
,, 16	5217	,,	2	,,	a+6·5, b+2·5				
,, 17	5218	,,	1	Or.	...	...	...	...	*6·0*±.
,, 18	5219	,,	,,	,,	...	...	...	...	*5·8.*
,, 18	5219	T.15	2	Ki.	a+9·5, b+6				
,, 23	5224	B.	1	Or.	...	...	...	...	*5·8.*
,, 24	5225	,,	,,	,,	...	...	...	...	*5·8.*
,, 24	5225	,,	,,	Ke.	a+5·5, b+4	...	...	...	Ruddy.
,, 25	5226	,,	,,	Or.	...	...	...	...	*5·8.*
,, 26	5227	,,	,,	Ke.	a+5, b+3½				
,, 28	5229	,,	,,	Or.	...	...	...	...	*5·8.*
,, 29	5230	,,	,,	Ke.	a+5½, b+4	...	...	...	Slightly yellow
,, 29	5230	,,	,,	Ma.	a+8, b+4				
,, 30	5231	,,	,,	,,	a+8, b+4				
,, 30	5231	,,	,,	Or.	...	...	...	...	*5·8.*
Aug. 1	5233	,,	2	Ke.	a+6, b+5	...	...	...	Slightly yellow.
,, 4	5236	,,	3	Or.	...	...	...	...	*>6·5.*
,, 5	5237	,,	1	,,	...	...	...	...	*>6·0.*
,, 13	5245	,,	2	Ma.	a+9, b+4				
,, 16	5248	,,	1	Wl.	b+4				
,, 17	5249	,,	2	Ma.	a+7, b+2				
,, 18	5250	,,	1	,,	a+8, b+4				
,, 18	5250	,,	,,	Wl.	b+4				
,, 18	5250	,,	2	Or.	...	...	...	...	*>6·5.*
,, 19	5251	,,	,,	Ke.	a+4·5, b+4·5	...	...	...	Slightly ruddy.
,, 20	5252	,,	1	Wl.	b+5				
,, 22	5254	,,	,,	,,	b+5				
,, 22	5254	,,	,,	Or.	...	...	...	...	*5·5*±.
,, 22	5254	,,	,,	Ma.	a+8, b+4				
,, 24	5256	,,	,,	,,	a+8, b+5				
,, 24	5256	,,	,,	Or.	...	...	...	...	*5·5* ?
,, 26	5258	,,	,,	Ma.	a+8, b+5				
,, 26	5258	,,	,,	Wl.	b+5				
,, 28	5260	,,	2	Ke.	a+5·5, b+4	...	...	...	Ruddy.
,, 30	5262	,,	1	Ma.	a+8, b+4				
,, 30	5262	,,	,,	Pe.	b+1				
Sept. 2	5265	,,	,,	Or.	...	...	...	...	*5·5*±.
,, 2	5265	,,	2	Ma.	a+8, b+5				
,, 4	5267	,,	,,	,,	a+9, b+5				
,, 11	5274	T.25	,,	Pe.	a+4, b−1				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Sept. 12	5275	T. 25	2	Pe.	a+4, b−1				
,, 13	5276	B.	,,	,,	b+1				
,, 14	5277	,,	,,	,,	b+0·5				
,, 14	5277	,,	1	Ma.	a+7, b+2				
,, 15	5278	,,	,,	Pe.	b+1				
,, 18	5281	,,	2	Ke.	a+4, b+2				
,, 20	5283	,,	1	Pe.	b+2				
,, 21	5284	,,	,,	,,	b+2				
,, 22	5285	,,	2	,,	b−1				
,, 23	5286	,,	,,	,,	b−1				
,, 26	5289	,,	,,	,,	=b	...	...	...	About, difficult obs.
,, 28	5291	,,	1	Wl.	b+5				
,, 28	5291	,,	,,	Ma.	a+6, b+2				
Oct. 12	5305	,,	,,	,,	a+4, b+2				
,, 13	5306	,,	,,	Ke.	a+2, =b				
,, 14	5307	,,	,,	Wl.	b+3				
,, 21	5314	,,	,,	,,	b+4				
,, 22	5315	,,	2	Ke.	a+2, b−1				
,, 27	5320	,,	1	Wl.	b+2				
Nov. 9	5333	,,	,,	Ke.	a+3, b+2				
,, 15	5339	,,	,,	Wl.	b+4				
,, 22	5346	,,	2	Ke.	a+2·5, b−2·5				
Dec. 9	5363	,,	2	,,	a+5, b+3				
,, 15	5369	,,	,,	,,	a+7, b+3·5	...	...	...	Reddish.
,, 16	5370	,,	1	,,	a+8, b+5	...	...	...	Distinctly reddish.
,, 21	5375	,,	2	,,	a+8, b+5				
,, 22	5376	,,	,,	,,	a+6, b+3				
1901.									
Jan. 13	5298	,,	,,	Wl.	a+4, b−3				
,, 19	5404	,,	,,	Ke.	a+2, b−4				
,, 22	5407	,,	,,	,,	a+2, b−8				
Feb. 12	5428	,,	,,	,,	a+2, b−8				
,, 21	5437	,,	,,	,,	a+2, b−8				
Mar. 22	5466	,,	,,	,,	a+2, b−8				
,, 25	5469	,,	2	Ch.	b−2				
Apr. 9	5484	,,	1	,,	a+4, b−2				
,, 10	5485	,,	,,	,,	a+4, b−2				
,, 12	5487	,,	,,	,,	a+3, b−2				
,, 13	5488	,,	2	,,	a+4, b−2				
,, 14	5489	,,	1	,,	a+3, b−3				
,, 16	5491	,	2	Ke.	a+3, b−7				
,, 18	5493	,,	1	Ch.	a+4 b−3				
,, 18	5493	,,	,,	Or.	...	...	...	...	7·0.
,, 19	5494	,,	,,	,,	a+4, b+2				
,, 19	5494	,,	,,	Ch.	a+3, b−4				
,, 20	5495	,,	,,	Or.	=b	...	...	...	Yellow.
,, 21	5496	,,	,,	,,	a+5, b+1				
,, 21	5496	,,	2	Ke.	a+4, b−3	...	...	...	Slightly red.
,, 23	5498	,,	1	,	a+4, b−4				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Apr. 23	5498	B.	1	Ch.	a+4, b−3				
May 6	5511	T.30	,,	,,	a+4, b−3				
,, 6	5511	B.	2	Or.	...	...	...	...	6·4.
,, 11	5516	,,	1	Ma.	a+3, b−5				
,, 13	5518	T.30	,,	Ch.	a+4, b−2				
,, 14	5519	B.	,,	Ma.	a+3, b−7				
,, 15	5520	,,	2	,,	a+2·5, b−8				
,, 16	5521	,,	,,	,,	a+2, b−8				
,, 18	5523	,,	,,	,,	a+2·5, b−9				
,, 19	5524	T.30	1	Ch.	a+3, b−3				
,, 20	5525	B.	2	Ma.	a+3, b−6				
,, 21	5526	,,	1	,,	a+3, b−6				
,, 22	5527	,,	2	,,	a+3, b−7				
,, 25	5530	,,	,,	,,	a+2, b−7				
,, 25	5530	,,	1	Ke.	a+3, b−6				
June 10	5546	T.30	,,	Ch.	a+3, b−3				
,, 23	5559	,,	,,	,,	a+3, b−3				
July 7	5573	B.	2	Ke.	a+4, =b	...	...	...	Reddish.
,, 15	5581	,,	1	Ch.	a+8, b+3				
,, 15	5581	,,	2	Ma.	a+4, b+1				
,, 16	5582	,,	,,	,,	a+5, =b				
,, 18	5584	,,	3	,,	a+5, b+2				
,, 18	5584	,,	1	Ch.	a+3, b−3				
Aug. 2	5599	,,	2	Ma.	a+6, b+2				
,, 4	5601	,,	3	,,	a+4, b+2				
,, 4	5601	,,	2	Pe.	b−1				
,, 5	5602	,,	1	,,	a+4, b−1				
,, 6	5603	,,	,,	,,	b+1				
,, 6	5603	,,	2	Ke.	a+1, b+1				
,, 7	5604	,,	1	Pe.	b+3				
,, 8	5605	,,	,,	,,	b+3				
,, 8	5605	,,	,,	Ch.	a+3, b−3				
,, 8	5605	,,	3	Ma.	a+2, b−4				
,, 10	5607	,,	2	,,	a+4, b−1·5				
,, 10	5607	,,	,,	Pe.	b+4				
,, 11	5608	,,	,,	,,	b+4				
,, 12	5609	,,	,,	,,	b+4				
,, 12	5609	,,	,,	Ke.	a+1, =b				
,, 13	5610	,,	1	Pe.	b+5				
,, 14	5611	,,	2	,,	b+4				
,, 15	5612	,,	1	,,	b+6				
,, 17	5614	,,	,,	,,	b+4				
,, 17	5614	,,	,,	Ma.	a+5, b−1				
,, 18	5615	,,	,,	Pe.	b+5				
,, 18	5615	,,	,,	Ch.	b+6	...	...	...	Bright red.
,, 19	5616	,,	2	Ma.	a+4, =b				
,, 20	5617	,,	1	,,	a+3, =b				
,, 20	5617	,,	,,	Pe.	b+4				
,, 21	5618	,,	,,	,,	b−2				
,, 22	5619	,,	2	,,	b−1				
,, 23	5620	,,	3	Ma.	a+3, b+1				
,, 23	5620	,,	2	Ke.	a+1, =b				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 28	5625	B.	2	Pe.	b+5				
Sept. 3	5631	,,	3	Ma.	a+5, b+1				
,, 4	5632	,,	2	Pe.	b+6				
,, 4	5632	,,	,,	Ke.	a+1·5, b+1·5				
,, 5	5633	,,	1	Ma.	a+5, b+3				
,, 5	5633	,,	2	Pe.	b+5				
,, 7	5635	,,	1	,,	b+5				
,, 9	5637	F.	,,	Ch.	a+8, b+3				
,, 14	5642	B.	,,	Pe.	b+5				
,, 15	5643	,,	2	Ke.	a+1, b−1				
,, 16	5644	,,	1	Pe.	b+4				
,, 18	5646	,,	,,	,,	b−2				
,, 18	5646	F.	,,	Ch.	b+4				
,, 19	5647	B.	,,	Pe.	b−3				
,, 20	5648	,,	2	Ke.	a+1, b−1				
Oct. 2	5660	,,	1	Ma.	a+2, b−2				
,, 4	5662	,,	2	Ke.	a+1, =b				
,, 5	5663	,,	,,	,,	a+1, =b				
,, 5	5663	,,	1	Pe.	b−4				
,, 9	5667	,,	2	Ke.	a+1, =b				
,, 18	5676	,,	,,	,,	a+2, =b				
,, 18	5676	,,	,,	Ma.	a+3, b−1·5				
,, 19	5677	,,	1	,,	a+4, b+1				
Nov. 14	5703	,,	2	Ke.	a+3, b+3				
,, 30	5719	,,	,,	,,	a+5, b+3				
Dec. 4	5723	,,	,,	,,	a+5, b+3				
,, 10	5729	,,	,,	,,	a+5, b+3				
,, 18	5737	,,	,,	,,	a+5, b+3				
1902.									
Feb. 11	5792	F.	1	Ch.	a+4, =b				
,, 27	5808	T. 30	2	,,	a+4, b−4				
,, 28	5809	F.	1	,,	a+5, =b				
Apr. 3	5843	,,	,,	,,	a+4, b−6				
,, 6	5846	,,	,,	,,	a+3, b−4				
,, 13	5853	,,	2	,,	a+5, b−3				
,, 15	5855	,,	1	,,	a+8, b+4				
,, 23	5863	,,	2	,,	b+4				
,, 24	5864	,,	1	,,	a+11, b+3				
,, 27	5867	,,	,,	,,	a+6, =b				
,, 28	5868	,,	3	,,	a+6, =b				
,, 30	5870	,,	1	,,	a+9, b+3				
May 2	5872	B.	,,	Wl.	a+4, b−4				
,, 2	5872	,,	,,	Ma.	a+1, b−7·5				
,, 3	5873	,,	,,	,,	=a, b−7·5				
,, 3	5873	,,	,,	Wl.	a+4, b−4				
,, 4	5874	,,	,,	Ma.	a+2, b−8				
,, 6	5876	,,	,,	Wl.	a+4, b−2				
,, 7	5877	,,	,,	,,	a+3, b−5				
,, 7	5877	,,	,,	Ma.	a+1, b−7				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
May 7	5877	B.	1	Ch.	a+6, b+3				
,, 8	5878	,,	,,	,,	a+10, b+4				
,, 8	5878	2	2	Ma.	a+1·5, b−7				
,, 9	5879	1	1	Wl.	a+5, b−3				
,, 10	5880	,,	,,	,,	a+5, b−3				
,, 10	5880	,,	,,	Ma.	a+3, b−7				
,, 12	5882	,,	,,	Wl.	a+6, b−2				
,, 12	5882	T.30	,,	Ch.	a+13, b+4				
,, 13	5883	B.	,,	Wl.	a+4, b−4				
,, 13	5883	,,	3	Ma.	a+3, b−7				
,, 14	5884	,,	2	Wl.	a+6, b−3				
,, 23	5893	,,	,,	,,	b+3				
,, 24	5894	,,	,,	Ma.	a+5, b−6				
,, 25	5895	,,	,,	,,	a+4, b−6				
,, 25	5895	T.30	1	Ch.	a+12, b+8				
,, 25	5895	B.	2	Wl.	b+3				
,, 26	5896	,,	,,	Ma.	a+5, b−6				
,, 26	5896	T.30	1	Ch.	a+2, b−4				
,, 27	5897	,,	,,	,,	a+14, b+6	...	...	...	Very bright.
,, 28	5898	B.	,,	Wl.	b+2				
,, 31	5901	,,	,,	,,	b+2				
June 24	5925	,,	2	Ma.	a+7, b+4	...	...	...	Date doubtful.
,, 26	5927	,,	,,	,,	a+5, b+2				
,, 26	5927	T.30	1	Ch.	a+5, b−3				
,, 29	5930	,,	,,	,,	a+7, b+2				
July 2	5933	,,	,,	,,	a+9, b+3				
,, 3	5934	B.	2	Ma.	a+6, b+3				
,, 6	5937	,,	,,	,,	a+6, b+3				
,, 11	5942	,,	,,	,,	a+7, b+4				
,, 23	5954	,,	3	,,	a+5, b+2				
,, 27	5958	,,	2	,,	a+5, b+2				
Aug. 1	5963	,,	,,	,,	a+6, b+2				
,, 14	5976	,,	,,	,,	a+5, b+2	...	...	...	Difficult.
,, 25	5987	,,	1	,,	a+4, b−1				
Sept. 26	6019	,,	,,	,,	a+8, b+5				
Oct. 8	6031	F.	,,	Ch.	a+4, b+4				
,, 10	6033	B.	3	,,	b+4				
,, 14	6037	F.	1	,,	a+11, b+4				
,, 21	6044	B.	2	Ma.	a+2, =b				
,, 26	6049	,,	1	,,	a+3, b−2				
,, 27	6050	,,	2	,,	a+1, b−2·5				
Nov. 4	6058	,,	1	,,	a+5, b+3				
,, 12	6066	,,	,,	Ch.	a+4, b−5				
,, 28	6082	,,	3	,,	a+12, b+4				
1903.									
May 2	6237	,,	1	Wl.	a+3, b−3				
,, 30	6265	,,	,,	,,	a+4, b−3				
,, 31	6266	,,	,,	,,	a+4, b−3				
,, 31	6266	,,	,,	Ma.	a+1, b−6·5				

(5758) X HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
June 2	6268	B.	2	Wl.	a+3, b−5				
,, 16	6282	,,	1	,,	a+5, b−2				
,, 17	6283	,,	,,	,,	a+5, b−3				
,, 20	6286	,,	,,	,,	a+5, b−3				
,, 23	6289	,,	,,	,,	a+5, b−3				
,, 25	6291	,,	,,	,,	b+2				
July 26	6322	,,	,,	Ma.	a+5, b+1				
Aug. 21	6348	,,	,,	,,	a+1, b−3				
1904.									
Jan. 15.	6495	F.9	...	B.	=a, b−5, e+2				
Apr. 6	6577	B.	1	Ma.	a+2, b−10				
,, 15	6586	F.9	...	B.	a+3, b−9, f+1, e+1				
May 2	6603	B.	1	Ma.	a+7, b−3				
,, 3	6604	F.9	...	B.	a+3, =b, d+5, f+2, e+2				
,, 10	6611	,,	...	B.	a+4, =b, d+9, e+2, f+1				
,, 18	6619	B.	1	Ma.	a+6, b−3				
June 5	6637	,,	2	,,	a+8, b−3				
,, 16	6648	F.9	...	B.	a+8, b−1				
July 6	6668	,,	...	,,	a+4, b−4, e+2, f+1				
,, 8	6670	B.	2	Ma.	a+3, b−1				
,, 12	6674	,,	1	,,	a+2, b−2				
,, 16	6678	,,	,,	,,	a+2, b−1·5				
,, 20	6682	,,	2	,,	a+2, b−5				
Aug. 3	6696	,,	1	,,	a+2, b−2				
,, 12	6705	,,	3	,,	a+3, b+1				
,, 12	6705	F.9	...	B.	a+4, b−3, e+1, f+2				
,, 14	6707	B.	1	Ma.	a+3, b+1				
,, 17	6710	,,	,,	,,	a+5, =b				
,, 28	6721	,,	,,	,,	a+7, b+5				
,, 29	6722	,,	,,	,,	a+7, b+5				
,, 30	6723	,,	,,	,,	a+6, b+4				
Sept. 3	6727	,,	,,	,,	a+6, b+4				
,, 14	6738	,,	,,	,,	a+5, b+4				
,, 16	6740	,,	3	,,	a+5, b+4				
,, 29	6753	,,	2	,,	a+5, b+1				
Oct. 7	6761	,,	,,	,,	a+7, b+5				
,, 11	6765	,,	1	,,	a+5, b+2				
,, 29	6783	,,	,,	,,	a+6, b+4				
Nov. 7	6792	F.9	...	B.	a+7, b+1, e+2, f+1, c+1				
Dec. 2	6817	,,	...	,,	{ a+8, b−2 / a+9, b−1 }	...	...	...	{ Obs. made with powers 9 and 80.
,, 14	6829	T.80	...	,,	a+8, b−2				
,, 18	6833	F.9	...	,,	a+10, b−2, c+2, f+1, e+1				

(5955) R DRACONIS.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Apr. 28	5138	T.28	1	Ma.	=19	11·0	10·1	+ ·9	
May 17	5157	,,	3	,,	...	...	10·5	...	Invisible < 10·9.
Aug. 5	5237	,,	,,	,,	...	...	11·4	...	,, <10·9.
Sept. 14	5277	,,	1	,,	4 - 2·5	8·5	9·0	- ·5	
,, 21	5284	T.25	,,	Pe.	1 - 6, 4 + 3, 9 + 8	7·9	8·6	·7	
,, 28	5291	T.28	,,	Ma.	2 - 5	7·9	8·2	·3	
Oct. 2	5295	T.	2	Or.	=2	7·4	8·1	·7	About.
,, 12	5305	B.	,,	,,	=2	7·4	7·8	·4	,,
,, 12	5305	,,	1	Ma.	1 - 3, 2 + 3	7·2	7·8	·6	
,, 15	5308	...	...	Or.	1 - 3, 2 + 3	7·2	7·7	·5	Warm tint.
,, 18	5311	B.	1	Ma.	=2	7·4	7·7	·3	
,, 21	5314	T.	,,	Or.	2 + 1	7·3	7·7	·4	
,, 26	5319	B.	,,	Ma.	1 - 3, 2 + 3	7·2	7·7	·5	
,, 27	5320	T.	,,	Or.	2 + 1	7·3	7·7	·4	
Nov. 17	5341	T.28	,,	Ma.	4 + 6·5	7·6	8·2	·6	
Dec. 15	5369	T.	2	Or.	9 - 1, 12 + 2	9·2	9·3	·1	
,, 19	5373	T.28	1	Ma.	9 - 2, 12 + 2	9·2	9·5	- ·3	
1901.									
Jan. 14	5399	,,	,,	,,	16 - 5	10·7	10·7	0	
,, 15	5400	B.	,,	Or.	...	...	10·8	...	Invisible.
Feb. 11	5427	T.	,,	,,	...	...	11·8	...	Invisible < 11·6.
May 14	5519	T.28	,,	Ma.	12 - 5, 16 + 2·5	9·9	9·2	+ ·7	
,, 16	5521	,,	,,	,,	12 - 6, 18 + 6	10·0	9·1	·9	
,, 18	5523	,,	2	,,	12 - 2	9·6	9·0	·6	
,, 20	5525	,,	,,	,,	=9	9·1	8·9	·2	
,, 22	5527	,,	,,	,,	9 + 1, 12 + 2	9·1	8·8	·3	
,, 25	5530	,,	,,	,,	9 + 3	8·8	8·6	+ ·2	
July 10	5576	,,	3	,,	4 + 5	7·8	7·9	- ·1	
,, 15	5581	,,	2	,,	4 + 4	7·9	8·0	·1	
,, 18	5584	,,	3	,,	4 + 3	8·0	8·1	·1	
,, 28	5594	T.30	2	Ch.	3 + 3, 4 + 6	7·7	8·4	·7	
Aug. 2	5599	T.28	,,	Ma.	4 + 2	8·1	8·7	·6	
,, 6	5603	T.30	1	Ch.	4 + 3	8·0	8·9	·9	
,, 8	5605	T.28	2	Ma.	4 - 5	8·8	8·9	·1	
,, 8	5605	T.	1	Pe.	4 - 5, 9 + 6, 12 + 8	8·6	8·9	·3	
,, 10	5607	T.28	,,	Ma.	4 - 3	8·6	9·0	- ·4	
,, 13	5610	T.30	,,	Ch.	=10	9·2	9·1	+ ·1	Reddish.
,, 14	5611	T.	2	Pe.	4 - 6, 12 + 3	9·0	9·2	- ·2	
,, 15	5612	,,	1	,,	4 - 7, 12 + 2	9·1	9·2	·1	
,, 17	5614	T.28	,,	Ma.	4 - 7·5, 12 + 2	9·1	9·3	·2	
,, 17	5614	T.30	,,	Ch.	9 + 5, 10 + 2, 12 + 8	8·7	9·3	·6	
,, 20	5617	T.28	,,	Ma.	9 + 1	9·0	9·5	·5	
,, 20	5617	T.	,,	Pe.	4 - 6, 12 + 2	9·0	9·5	·5	

(5955) R DRACONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 22	5619	T.	2	Pe.	4−8, 12+4	9·0	9·6	·6	
,, 23	5620	T.28	3	Ma.	9−2, 12+2	9·2	9·6	·4	
Sept. 3	5631	,,	,,	,,	9−8, 16+4	9·8	10·2	·4	
,, 4	5632	T.30	1	Ch.	12−5, 13−4, 16−2, 17+2, 18+6	10·1	10·2	·1	Red.
,, 5	5633	T.	1	Pe.	16−2	10·4	10·7	·3	
,, 7	5635	,,	,,	,,	16−4	10·6	10 8	−·2	
,, 9	5637	T.30	1	Ch.	16−3, =17, 18+3	10·4	10·4	0	Red.
,, 13	5641	T	,,	Pe.	16−6	10·8	10·6	+·2	
,, 15	5643	T.30	,,	Ch.	17−2, =18, 19+3	10·6	10·7	−·1	
,, 18	5646	T.	,,	Pe.	22−4	12·0	10·8	+1·2	About.
Oct. 2	5660	T.28	2	Ma.	...	...	11·4	...	Invisible < 10·2.
,, 3	5661	T.60	1	Ch.	=17, 18+2, 20+3	10·6	11·5	−·9	
,, 18	5676	T.90	3	,,	27+5	11·5	11·9	−·4	
Dec. 8	5727	T.95	1	,,	=27	12·0	11·5	+·5	
,, 16	5735	T.160	,,	,,	17−5, 22+2, 27+5	11·3	11·1	·2	
,, 26	5745	,,	,,	,,	17−5, 18 5, 19−3, =20	11·1	10·5	·6	
,, 27	5746	T.95	,,	,,	17−6, 19−3, 20+2, 22+4	11·1	10·5	·6	
1902.									
Jan. 4	5754	,,	,,	,,	16−4, 17−3, 18−2, 19+1	10·7	9·9	·8	
,, 5	5755	,,	,,	,,	16−4, 17−2, 18−1, =19	10·7	9·9	·8	
,, 31	5781	,,	,,	,,	4−3, 9+5, 12+8	8·6	8·3	+·3	
Feb. 9	5790	,,	,,	,,	2−4, 4+3	7·9	8·0	−·1	Yellowish white.
,, 27	5808	,,	2	,,	2−3	7·7	7·7	0	
,, 28	5809	,,	3	,,	2−6	8·0	7·7	+·3	
Mar. 25	5834	,,	2	,,	4+4	7·9	8·2	−·3	
Apr. 3	5843	,,	3	,,	4+4	7·9	8·6	·7	
,, 13	5853	,,	2	,,	4−4, 9+4, 12+8	8·6	9·0	·4	
,, 18	5858	,,	1	,,	4−6, 9+3, 12+5	8·8	9·2	·4	
,, 23	5863	,,	,,	,,	4−4, 9+4, 12+5	8·7	9·5	·8	
,, 27	5867	,,	,,	,,	10+3, 12+4, 13+5	9·0	9·7	·7	
May 5	5875	,,	,,	,,	=9, 12+4, 16+6	9·2	10·1	·9	
,, 8	5878	,,	,,	,,	9−4, =12, 16+3	9·6	10·2	·6	
,, 8	5878	T.28	,,	Ma.	12−6, 16+2	10·0	10·2	·2	
,, 10	5880	,,	,,	,,	12−4, 16+4	9·8	10·3	·5	
,, 13	5883	,,	2	,,	12−4, 16+4	9·8	10·4	·6	
,, 24	5894	,,	,,	,,	=18	10·6	10·9	·3	About.
,, 25	5895	T.95	1	Ch.	16−2, =17	10·4	11·0	·6	
,, 27	5897	,,	,,	,,	17−3, 18−2	10·8	11·1	·3	
June 24	5925	T.28	2	Ma.	...	...	12·0	...	Invisible < 9·4.
July 3	5934	,,	1	,,	...	...	12·1	...	,,
,, 6	5937	T.95	,,	Ch.	=22, 27+4	11·6	12·2	−·6	

(5955) R DRACONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Aug. 25	5987	T.95	1	Ch.	=19	11·0	10·8	+ ·2	
Sept. 4	5997	T.	...	Co.	...	*9·8*	10·1	− ·3	
,, 21	6014	,,	...	,,	...	*9·5*	9·0	+ ·5	
,, 28	6021	,,	...	,,	...	*8·8*	8·6	·2	
Oct. 4	6027	,,	...	,,	...	*8·5*	8·3	+ ·2	
,, 8	6031	T.95	1	Ch.	4+6	7·7	8·1	− ·4	
,, 10	6033	,,	,,	,,	4+8	7·5	8·1	·6	
,, 14	6037	,,	,,	,,	=2	7·4	7·9	·5	
,, 21	6044	,,	,,	,,	1−4, 2+3	7·2	7·7	·5	
,, 21	6044	T.28	,,	Ma.	1−3, 2+1	7·3	7·7	− ·4	Bright, warm tint.
,, 21	6044	T.	...	Co.	...	7·8	7·7	+ ·1	
,, 26	6049	T.28	1	Ma.	2+1	7·3	7·7	− ·4	
,, 30	6053	T.	...	Co.	...	*7·6*	7·7	− ·1	
Nov. 1.	6055	T.95	1	Ch.	1−2, b+1	7·1	7·7	− ·6	
,, 7	6061	T.	...	Co.	...	*7·5*	7·8	·3	
,, 15	6069	,,	...	,,	...	*7·6*	7·9	·3	
,, 21	6075	,,	...	,,	...	*8·0*	8·1	·1	
,, 28	6082	,,	...	,,	...	*7·8*	8·3	·5	
Dec. 24	6108	,,	...	,,	...	*8·5*	9·4	·9	
,, 31	6115	,,	...	,,	...	*9·5*	9·8	·3	
1903.									
Jan. 23	6138	,,	1	,,	=18	10·6	10·8	·2	Doubtful.
Feb. 1	6147	,,	2	,,	18−4	11·0	11·2	·2	,,
,, 13	6159	,,	1	,,	=19	11·0	11·7	·7	
,, 17	6163	T.28	1	Ma.	...	...	11·8	...	Invisible.
,, 21	6167	T.	2	Co.	20−3	11·5	11·9	·4	
,, 28	6174	,,	,,	,,	20−3	11·5	12·1	·6	
Mar. 3	6177	T.28	1	Ma.	...	..	12·1	...	Invisible.
,, 16	6190	T.	...	Co.	20−6	11·8	12·2	− ·4	
,, 28	6202	,,	...	,,	33+1	12·8	12·1	+ ·7	
Apr. 2	6207	,,	...	,,	33+1	12·8	11·9	+ ·9	
,, 11	6216	,,	...	,,	20−3	11·5	11·6	− ·1	
,, 24	6229	,,	...	,,	19+1	10·9	11·0	− ·1	
May 15	6250	,,	...	,,	16−3	10·5	9·6	+ ·9	Doubtful obs.
,, 24	6259	,,	...	,,	=12	9·4	9·1	+ ·3	
June 21	6287	,,	...	,,	...	*7·0*	7·8	− ·8	Approximate.
July 2	6298	,,	...	,,	...	*6·8*	7·7	·9	,,
,, 23	6319	,,	...	,,	...	*7·5*	8·1	·6	,,
Aug. 25	6352	,,	...	,,	9−1·5, 12+1·5	9·2	9·4	·2	
,, 25	6352	T.28	1	Ma.	9+2	8·9	9·4	·5	
Sept. 2	6360	T.	...	Co.	9−1·5, 12+1·5	9·2	9·8	− ·6	
,, 12	6370	,,	...	,,	19+1	10·9	10·2	+ ·7	
,, 18	6376	,,	...	,,	18−2, 19+2	10·8	10·5	·3	

(5955) R DRACONIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Sept. 20	6378	T.	1	Or.	...	...	10·6	...	Invisible < 9·8.
,, 25	6383	,,	...	Co.	19 − 2	11·2	10·8	·4	
Oct. 15	6403	,,	...	,,	33 − 3	13·2	11·6	1·6	
,, 25	6413	,,	...	,,	33 − 3	13·2	11·9	1·3	
Nov. 6	6425	T.28	1	Ma.	...	...	12·1	...	Invisible < 9·4.
,, 14	6433	T.	...	Co.	...	...	12·2	...	,, < 13·5.
1904.									
Jan. 10	6490	,,	...	,,	...	...	10·0	...	,, < 11·2.
,, 13	6493	,,	...	,,	...	*12·5*	9·8	2·7	
,, 14	6494	T.28	1	Ma.	...	...	9·7	...	Invisible < 10·2.
,, 22	6502	T.	...	Co.	...	...	9·2	...	,,
Feb. 6	6517	,,	...	,,	18 − 1·5, 19 + 1·5	10·8	8·3	2·5	
,, 13	6524	T.28	1	Ma.	12 − 5, 16 + 2·5	9·9	8·1	1·8	
Mar. 10	6550	T.	...	Co.	9 − 2, 12 + 2	9·2	7·7	1·5	
,, 21	6561	,,	...	,,	9 − 1	9·2	8·0	1·2	
Apr. 6	6577	,,	...	,,	12 − 4, 16 + 4	9·8	8·4	1·4	
,, 10	6581	T.28	1	Ma.	12 − 5, 16 + 2·5	9·9	8·6	1·3	
,, 12	6583	,,	,,	,,	16 − 2, 18 + 2	10·4	8·7	1·7	
,, 20	6591	,,	2	,,	= 16	10·2	9·1	1·1	
,, 25	6596	T.	...	Co.	16 − 2, 18 + 2	10·4	9·3	1·1	
May 3	6604	T.28	1	Ma.	18 − 3	10·9	9·7	+ 1·2	
,, 18	6619	,,	,,	,,	...	...	10·4	...	Glimpsed < 10·5.
,, 18	6619	T.	...	Co.	20 − 3	11·5	10·4	+ 1·1	
June 3	6635	,,	...	,,	...	...	11·1	...	Invisible.
,, 3	6635	T.28	1	Ma.	...	...	11·1	...	,, < 10·6.
July 5	6667	T.	...	Co.	...	...	12·1	...	,, < 13·2.
Aug. 28	6721	,,	...	,,	...	..	11·0	...	,, < 13·2.
Sept. 3	6727	T.28	1	Ma.	...	...	10·6	...	,,
,, 3	6727	T.	...	Co.	33 + 7	12·2	10·6	1·6	
,, 14	6738	T.28	1	Ma.	16 − 5	10·7	9·9	·8	
,, 15	6739	,,	,,	,,	= 18	10·6	9·8	·8	
,, 16	6740	,,	2	,,	16 − 2, 18 + 2	10·4	9·7	·7	
Oct. 3	6757	T.	...	Co.	12 − 3	9·7	8·6	1·1	
,, 11	6765	T.28	1	Ma.	4 − 7, 12 + 3·5	9·0	8·2	·8	
,, 29	6783	,,	,,	,,	4 − 2, 6 + 5	8·1	7·7	·4	
,, 29	6783	T.	...	Co.	...	*7·8*	7·7	·1	Very doubtful obs.
Nov. 12	6797	,,	..	,,	4 − 4, 9 + 4	8·7	7·8	·9	
,, 14	6799	T.28	1	Ma.	4 − 5·5, 12 + 5·5	8·8	7·8	1·0	
Dec. 5	6820	T.	...	Co.	9 + 2	8·9	8·4	+ ·5	

(6044) S HERCULIS.

NOTE.

Data for mean curve:—Period, 308 d. $M-m$, 152 d. Variation, 6·7 m. to 12·3 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Sept. 11	4909	B.	1	Ma.	...	7·0	6·8	+ ·2	Estimated.
1900.									
July 3	5204	T.28	2	,,	=6	8·8	6·9	1·9	
,, 15	5216	B.	,,	Or.	...	...	6·7	...	Invisible<7·0.
,, 18	5219	T.15	,,	Ki.	2−9, 5+5, 4+3	7·8	6·7	1·1	
,, 23	5224	B.	1	Or.	=2	6·9	6·7	·2	About.
,, 24	5225	,,	,,	,,	=2	6·9	6·8	·1	,,
,, 24	5225	,,	,,	Ma.	=2	6·9	6·8	·1	
,, 28	5229	,,	,,	Or.	=2	6·9	6·8	+ ·1	About.
,, 29	5230	,,	,,	Ma.	1−3, 2+2	6·7	6·8	− ·1	
,, 30	5231	T.28	2	,,	=2	6·9	6·8	+ ·1	Ruddy.
,, 30	5231	T.	1	Or.	=2	6·9	6·8	+ ·1	
Aug. 5	5237	T.28	3	Ma.	1−2·5, c+3	6·5	6·9	− ·4	Ruddy.
,, 5	5237	B.	1	Or.	1−3, 2+3	6·7	6·9	·2	
,, 12	5244	T.15	2	Ki.	1−4, 2+3·5, c+5	6·5	7·1	·6	
,, 13	5245	,,	,,	,,	1−4, 2+4, 3+9	6·7	7·1	·4	
,, 13	5245	T.B.	,,	Ma.	1−5	6·9	7·1	·2	
,, 14	5246	TB28	,,	,,	1−2·5	6·7	7·1	·4	Ruddy.
,, 15	5247	B.	,,	,,	1−3·5	6·8	7·1	·3	
,, 15	5247	T.15	2	Ki.	1−5·5, 2+6	6·6	7·1	·5	
,, 17	5249	T.28	1	Ma.	1−4	6·8	7·2	·4	Slightly ruddy.
,, 18	5250	B.	2	,,	1−3·5	6·8	7·2	·4	
,, 21	5253	T.15	1	Ki.	1−6·5, 2+3, 3+10	6·6	7·3	·7	
,, 22	5254	T.28	,,	Ma.	1−5, 2+2	6·8	7·3	·5	
,, 22	5254	B.	,,	Or.	1−3	6·7	7·3	·6	About.
,, 23	5255	T.28	,,	Ma.	=2	6·9	7·3	·4	
,, 24	5256	,,	,,	,,	2−1·5	7·1	7·4	·3	
,, 25	5257	,,	,,	,,	=2, 3+2	7·2	7·4	·2	
,, 26	5258	B.	,,	,,	=2	6·9	7·4	·5	
,, 30	5262	T.28	,,	,,	2 2·5	7·2	7·6	·4	
Sept. 2	5265	,,	2	,,	2−2·5, 3−1	7·4	7·6	·2	
,, 2	5265	B.	1	Or.	1−7	7·1	7·6	− ·5	About.
,, 12	5275	T.28	2	Ma.	5−1, 4+2	8·2	8·0	+ ·2	
,, 14	5277	,,	1	,,	3−7, 4+1	8·1	8·1	0	
,, 23	5286	T.33	,,	Or.	...	...	8·6	...	Invisible.
,, 28	5291	T.28	,,	Ma.	6−1	8·9	8·8	+ ·1	
Oct. 18	5311	,,	2	,,	10+2	10·3	9·9	·4	
,, 27	5320	,,	1	,,	=10	10·5	10·4	+ ·1	
1901.									
Mar. 25	5469	T.30	2	Ch.	1−4	6·8	8·6	− 1·8	
Apr. 21	5496	,,	1	,,	6−1	8·9	7·4	+ 1·5	
,, 21	5496	T.	,,	Or.	6−3	9·1	7·4	1·7	About.

(6044) S HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
May 12	5517	T.28	2	Ma.	=3	7·6	6·8	·8	
,, 15	5520	,,	,,	,,	=3, 4+5	7·6	6·8	·8	
,, 16	5521	,,	,,	,,	5+1	8·2	6·8	1·4	
,, 20	5525	,,	,,	,,	3+1·5	7·5	6·7	·8	
,, 22	5527	,,	1	,,	2−3·5, 3+3·5	7·3	6·7	·6	
,, 25	5530	,,	2	,,	4+1	8·0	6·8	1·2	
June 8	5544	T.30	1	Ch.	e−3, 3+3	7·2	7·0	·2	
July 15	5581	T.28	2	Ma.	6−1	8·9	8·2	·7	
,, 16	5582	T.30	1	Ch.	=5, 4−3	8·4	8·2	+ ·2	
,, 18	5584	,,	,,	,,	5−2, 6+3	8·5	8·2	+ ·2	
,, 18	5584	T.28	3	Ma.	6−2	9·0	8·3	·7	
,, 22	5588	T.30	1	Ch.	5−4, 7+3	8·6	8·5	+ ·1	
,, 27	5593	,,	2	,,	5−3, 1+3	8·7	8·8	− ·1	
Aug. 2	5599	T.28	,,	Ma.	=6	8·8	9·1	·3	
,, 6	5603	,,	,,	,,	6−3	9·1	9·3	− ·2	
,, 6	5603	T.30	1	Ch.	6−4, =m	9·3	9·3	0	
,, 8	5605	,,	,,	,,	=m	9·4	9·4	0	
,, 8	5605	T.28	2	Ma.	7−3	9·2	9·4	− ·2	
,, 10	5607	,,	1	,,	6−5, 9+5	9·4	9·5	·1	
,, 13	5610	T.30	,,	Ch.	7−4, 8+3, 10+6	9·6	9·7	·1	Brilliant red.
,, 17	5614	T.28	2	Ma.	6−5, 9+5	9·4	9·8	− ·4	
,, 18	5615	T.30	1	Ch.	=8, 9+2	10·0	9·9	+ ·1	
,, 20	5617	T.120	,,	Ma.	10+2	10·3	10·1	+ ·2	
,, 23	5620	T.28	3	,,	6−14, 10+3·5	10·2	10·2	0	
Sept. 3	5631	T.120	3	,,	=10	10·5	10·8	− ·3	
,, 4	5632	T.60	1	Ch.	8−2, 9−2, 10+3, 12+4, 14+2	10·2	10·9	·7	
,, 9	5637	,,	,,	,,	9−3, 10+3, 11+3, 13+3, 15+4, 16+5	10·4	11·1	·7	
,, 13	5641	T.28	3	Ma.	=10	10·5	11·3	·8	
,, 15	5643	T.60	1	Ch.	10−1, 13+2, 15+4, 16+5	10·6	11·3	·7	
Oct. 2	5660	T.28	,,	Ma.	...	...	12·0	...	Invisible < 10·5.
,, 3	5661	T.60	,,	Ch.	10−4, 13−4, 17−2, =18	11·2	12·0	·8	
,, 7	5665	,,	,,	,,	10−8, 18−3, =20, 22+2	11·5	12·1	− ·6	
,, 19	5677	T.90	2	,,	...	...	12·3	...	< 11·8.
1902.									
Apr. 18	5858	T.95	,,	,,	5+4, 4+2	7·9	7·2	+ ·7	
,, 23	5863	,,	1	,,	4−4, 5−2, 7+4	8·5	7·4	1·1	
,, 27	5867	,,	2	,,	4−3, 5+2	8·3	7·5	·8	Red.
May 8	5878	,,	1	,,	=5, 6+2, 7+5	8·4	7·9	·5	
,, 10	5880	T.28	,,	Ma.	6+1·5	8·6	8·0	·6	
,, 25	5895	,,	,,	,,	6−3	9·1	8·7	·4	
,, 25	5895	T.95	,,	Ch.	5−5, 6−2, =7	8·9	8·7	·2	
,, 26	5896	,,	,,	,,	6−3, 7+2	8·9	8·7	+ ·2	
June 26	5927	T.28	3	Ma.	10+1	10·4	10·4	0	

(6044) S HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
July 3	5934	T.28	1	Ma.	10 – 1	10·6	10·7	– ·1	
,, 11	5942	,,	2	,,	10 – 1	10·6	11·1	·5	
,, 27	5958	,,	1	,,	10 – 5	11·0	11·7	·7	
,, 29	5960	T.95	,,	Ch.	=8, 10+3	10·1	11·8	1·7	
Aug. 1	5963	T.28	,,	Ma.	10 – 5	11·0	11·9	– ·9	
,, 25	5987	,,	,,	,,	...	...	12 3	...	Invisible.
Oct. 26	6049	,,	,,	,,	=10	10·5	10·2	+ ·3	
1903.									
Aug. 25	6352	,,	,,	,,	10+2	10·3	10·3	0	
1904.									
May 18	6619	,,	,,	,,	10 – 5	11·0	11·9	– ·9	
July 8	6670	,,	,,	,,	8+1	10·0	9·5	+ ·5	
,, 12	6674	,,	,,	,,	5 – 7·5, 6+2	8·8	9·1	– ·3	
,, 16	6678	,,	,,	,,	5 – 2	8·5	8·9	– ·4	
Aug. 1	6694	,,	,,	,,	5 – 2·5, 6+2·5	8·5	8·1	+ ·4	Ruddy.
,, 6	6699	,,	,,	,,	5 – 2·5, 6+2·5	8·5	7·8	·7	
,, 8	6701	,,	,,	,,	5 – 1·5, 6+4·5	8·4	7·8	+ ·6	
,, 12	6705	,,	,,	,,	=5	8·3	7·6	+ ·7	Ruddy.
,, 14	6707	,,	,,	,,	=5	8·3	7·5	·8	
,, 17	6710	,,	,,	,,	=5	8·3	7·4	·9	
,, 28	6721	,,	,,	,,	=3	7·6	7·0	·6	
,, 29	6722	,,	,,	,,	4+1, 5+2	8·1	7·0	1·1	
,, 30	6723	,,	,,	,,	3 – 3, 4+1	7·9	7·0	·9	
Sept. 3	6727	,,	,,	,,	3 – 3·5, 5+3·5	8·0	6·9	1·1	Ruddy.
,, 14	6738	,,	,,	,,	=3	7·6	6·7	·9	Warm tint.
,, 16	6740	,,	2	,,	3 – 6, 5+2	8·2	6·7	1·5	
Oct. 3	6757	,,	1	,,	3 – 2·5, 4+2·5	7·8	6·9	·9	Ruddy.
,, 7	6761	,,	,,	,,	3 – 4, 4+1	8·0	7·0	1·0	
,, 11	6765	,,	,,	,,	3 – 5, 4+2, 5+4	8·0	7·1	·9	
,, 29	6783	,,	,,	,,	3 – 10, 4+1, 5+2	8·2	7·6	·6	Ruddy.
Nov. 14	6799	,,	2	,,	5 – 3, 7+3	8·6	8·2	+ ·4	

(6512) T HERCULIS.

NOTE.

Data for mean curve :—Period, 165 d. $M-m$, 79 d. Variation, 7·7 m. to 11·3 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Aug. 17	5249	T.28	1	Ma.	29+1	10·9	9·2	+1·7	
,, 22	5254	B.	,,	Or.	...	...	8·9	...	Invisible<90.
,, 24	5256	T.28	,,	Ma.	29+2	10·8	8·8	2·0	
,, 25	5257	,,	,,	,,	29+4	10·6	8·7	1·9	
,, 30	5262	,,	,,	,,	=1	9·2	8·5	·7	*
Sept. 2	5265	,,	2	,,	=8	8·7	8·4	+ ·3	
,, 12	5275	,,	3	,,	6+1	7·7	8·0	− ·3	
,, 14	5277	,,	1	,,	4−2, 14−1	8·5	7·9	+ ·6	It is doubtful if this obs. is correct.
,, 15	5278	T.25	,,	Pe.	4−2, 6−4, 14+5	8·2	7·9	+ ·3	
,, 19	5282	B.	,,	Ma.	=6	7·8	7·8	0	
,, 20	5283	T.25	,,	Pe.	6−2, 14+7	8·4	7·8	+ ·6	
,, 21	5284	,,	,,	,,	4−3, 6−2, 14+8	8·0	7·7	+ ·3	
,, 26	5289	B.	2	,,	4−2, 3−6	7·3	7·7	− ·4	Doubtful obs.
,, 27	5290	,,	,,	Ma.	=6	7·8	7·7	+ ·1	,, ,,
,, 28	5291	T.28	1	,,	6−2	8·0	7·7	·3	
,, 29	5292	T.	,,	Or.	4−5	7·7	7·2	·5	
Oct. 12	5305	B.	,,	Ma.	...	...	7·9	...	Invisible<7·2.
,, 18	5311	T.28	,,	,,	8+4, 10+4	8·4	8·2	·2	
,, 21	5314	B.	,,	Pe.	14−5	9·9	8·3	1·6	Very doubtful obs.
,, 21	5314	T.	1	Or.	14+3	9·1	8·3	·8	*
,, 26	5319	,,	2	,,	=14	9·4	8·5	·9	About.
,, 27	5320	,,	1	,,	10−4, 14+2	9·3	8·6	·7	
,, 27	5320	T.28	2	Ma.	=14	9·4	8·6	·8	
Nov. 17	5341	,,	,,	,,	=29	11·0	10·0	1·0	About; suspected only.
,, 25	5349	T.	1	Or.	=31	11·2	10·5	·7	About; doubtful.
1901.									
Apr. 10	5485	,,	,,	,,	14−3	9·7	8·6	1·1	Approximate.
,, 15	5490	,,	,,	,,	14−5	9·9	8·9	1·0	About.
,, 18	5493	,,	,,	,,	14−10, 31+3	10·7	9·1	1·6	*
,, 18	5493	T.60	,,	Ch.	31+3	10·9	9·1	1·8	
,, 21	5496	T.30	,,	,,	...	*10·5*±	9·3	+1·2	Just visible, 14 well seen.
May 18	5523	T.28	1	Ma.	...	*10·5*±	10·9	− ·4	Just glimpsed.
,, 20	5525	T.30	,,	Ch.	14−5	9·9	11·0	−1·1	
,, 22	5527	T.28	2	Ma.	=31	11·2	11·1	+ ·1	About.
July 15	5581	,,	,,	,,	3−14, 14+14	8·1	9·1	−1·0	Very doubtful obs.
,, 15	5581	T.30	1	Ch.	14+3	9·1	9·1	0	
,, 18	5584	,,	,,	,,	=10, 14+3	9·0	8·9	+ ·1	
,, 22	5588	,,	,,	,,	=10	8·9	8·7	+ ·2	
,, 27	5593	,,	2	,,	5−2, 8+3	8·3	8·4	− ·1	
,, 28	5594	,,	,,	,,	8+4	8·3	8·4	− ·1	

(6512) T HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 6	5603	T.30	1	Ch.	4−6, 6−4	8·0	8·0	0	
,, 7	5604	F.	,,	Pe.	6−4, 8+5	8·2	8·0	+ ·2	
,, 8	5605	,,	,,	,,	6−1, 8+8	7·9	8·0	− ·1	
,, 8	5605	T.30	,,	Ch.	4−3, =6	7·6	8·0	·4	
,, 8	5605	T.28	2	Ma.	4−5	7·7	8·0	− ·3	Date uncertain.
,, 13	5610	T.30	1	Ch.	=6	7·8	7·8	0	
,, 14	5611	F.	2	Pe.	4−3, 6+1	7·6	7·8	− ·2	
,, 15	5612	,,	1	,,	4−2, 6+1, 8+7	7·7	7·8	·1	
,, 17	5614	T.28	,,	Ma.	=4	7·2	7·7	·5	
,, 18	5615	T.30	,,	Ch.	4−2, 5+3, 6+3	7·6	7·7	·1	Very light orange.
,, 20	5617	T.28	,,	Ma.	=4	7·2	7·7	·5	
,, 20	5617	F.	,,	Pe.	4−3, 6+1	7·6	7·7	− ·1	
,, 21	5618	,,	2	,,	6+1	7·7	7·7	0	
,, 23	5620	T.28	3	Ma.	4−6·5, 6+1	7·8	7·7	+ ·1	
Sept. 3	5631	,,	2	,,	6−3	8·1	7·9	·2	
,, 4	5632	T.30	1	Ch.	4−8, 5−5, 6−4, 8+4, 10+6	8·3	7·9	·4	Red.
,, 5	5633	T.	,,	Pe.	6−2, 8+4	8·2	7·9	·3	
,, 9	5637	T.30	,,	Ch.	5−6, 6−6, 8+2, 10+3	8·6	8·1	·5	Very dull red.
,, 13	5641	T.28	2	Ma.	8+1	8·6	8·2	·4	
,, 15	5643	T.30	1	Ch.	=8, 10+3, 11+3, 14+5	8·7	8·3	+ ·4	
,, 16	5644	T.	,,	Pe.	6−3, 8+2	8·3	8·3	0	
,, 17	5645	,,	,,	,,	6−5, 8+2	8·4	8·3	+ ·1	
,, 18	5646	,,	,,	,,	6−5, 8+2	8·4	8·4	0	
,, 18	5646	T.30	,,	Ch.	=10, 11+1, 14+3	8·9	8·4	+ ·5	Very dull red.
Oct. 2	5660	T.28	,,	Ma.	14−2, 22+2	9·6	9·2	·4	
,, 3	5661	T.30	,,	Ch.	25−1, 29+4, =27	10·7	9·3	1·4	
,, 7	5665	,,	,,	,,	22−4, 25−2, =27, 29+1	10·6	9·7	·9	Dull red.
,, 9	5667	T.28	,,	Ma.	...	...	9·8	...	Invisible.
,, 13	5671	T.20	,,	LeB.	=31	11·2	10·0	1·2	Doubtful.
,, 18	5676	T.28	,,	Ma.	29−1	11·1	10·4	·7	
,, 18	5676	T.60	2	Ch.	29−6, 31−5, 37+2, 39+5	11·6	10·4	1·2	
,, 31	5689	T.90	,,	,,	45−3	12·7	11·0	1·7	About.
Nov. 3	5692	T.28	1	Ma.	...	...	11·1	...	Invisible.
Dec. 8	5727	T.95	2	Ch.	29+3	10·7	10·5	·2	
,, 16	5735	,,	1	,,	14−3, 22+1, 25+3, 29+4	10·1	9·9	·2	
1902.									
Apr. 6	5846	,,	,,	,,	34−8, 45−2, =46	12·5	10·7	1·8	
,, 18	5858	,,	3	,,	...	...	11·1	...	< 11·8
,, 23	5863	,,	,,	,,	...	...	11·3	...	< 11·0
,, 27	5867	T.160	1	,,	...	...	11·3	...	< 11·0
,, 28	5868	,,	3	,,	39−8, =52	13·0	11·3	1·7	
May 3	5873	T.67	1	Ma.	...	...	11·3	...	Invisible.
,, 5	5875	T.160	2	Ch.	54+4	13·0	11·2	1·8	
,, 25	5895	,,	1	,,	=29, 31+2	11·0	10·2	·8	
,, 26	5896	,,	2	,,	=29, 31+1	11·0	10·1	·9	
,, 27	5897	,,	1	,,	=26, 29+5	10·4	10·1	·3	

(6512) T HERCULIS—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
June 24	5925	T. 160	3	Ch.	=8	8·7	8·3	·4	About.
,, 29	5930	,,	1	,,	8+3, 10+5	8·4	8·1	·3	
July 27	5958	T. 28	,,	Ma.	6−5·5, 10+5·5	8·4	7·8	·6	
Aug. 1	5963	,,	2	,,	8−1·5	8·8	7·9	·9	
,, 25	5987	,,	1	,,	29+2	10·8	9·0	1·8	
Oct. 8	6031	T. 95	2	Ch.	...	...	11·3	...	< 12·4.
,, 21	6044	,,	1	,,	=37, 39+2	11·8	11·2	·6	
,, 21	6044	T. 28	2	Ma.	...	...	11·2	...	Invisible.
,, 26	6049	,,	1	,,	...	...	10·9	...	,,
,, 30	6053	T. 120	,,	,,	29−4	11·4	10·7	+ ·7	
1903.									
June 2	6268	T.	,,	Or.	=6	7·8	7·8	0	
,, 4	6270	B.	2	Ma.	...	...	9·5	...	Invisible.
Aug. 21	6348	T.	1	Or.	3−6, 6+6	7·2	11·0	−3·8	
,, 25	6352	T. 28	,,	Ma.	...	...	11·2	...	Invisible.
Nov. 6	6425	,,	,,	,,	=8	8·7	8·0	+ ·7	
,, 17	6436	T.	1	Or.	6−8, 14+8	8·6	7·7	+ ·9	Doubtful identification.
,, 19	6438	T. 28	,,	Ma.	8+1·5	8·5	7·7	·8	
1904.									
May 4	6605	,,	2	,,	4−2	7·4	7·7	·7	
,, 18	6619	,,	1	,,	=5	8·1	7·9	·2	
June 3	6635	,,	2	,,	=12, 19+2·5	9·4	8·6	·8	
,, 7	6639	,,	,,	,,	8−9, 19+3	9·6	8·8	+ ·8	
,, 22	6654	,,	1	,,	=14	9·4	9·8	− ·4	
July 8	6670	,,	,,	,,	29−2	11·2	10·8	+ ·4	
,, 12	6674	,,	,,	,,	29−2·5, =31	11·2	10·9	·3	
Aug. 1	6694	,,	2	,,	...	*10·5*±	11·3	− ·8	Difficult to see.
,, 8	6701	,,	1	,,	...	*10·5*±	11·1	·6	Glimpsed.
,, 14	6707	,,	,,	,,	...	*10·5*±	10·8	− ·3	,,
,, 30	6723	,,	,,	,,	29+2·5	10·7	9·8	+ ·9	
Sept. 3	6727	,,	,,	,,	=14, 29+5	10·0	9·9	+ ·1	
,, 14	6738	,,	2	,,	8+1·5	8·5	8·8	− ·3	
,, 16	6740	,,	,,	,,	...	*8·4*±	8·2	+ ·2	*
,, 29	6753	,,	,,	,,	=4	7·2	8·1	− ·9	
Oct. 3	6757	,,	1	,,	6−1·5	8·0	7·9	+ ·1	
,, 7	6761	,,	,,	,,	4−3, 6+3	7·5	7·8	− ·3	
,, 11	6765	,,	,,	,,	4−3, 6+3	7·5	7·7	·2	
,, 13	6767	,,	,,	,,	=4, 6+1	7·4	7·7	·3	
,, 29	6783	,,	,,	,,	4−1, 6−2	7·6	7·9	− ·3	
Nov. 14	6799	,,	,,	,,	=8	8·7	8·6	+ ·1	

(6733) R SCUTI.

NOTES.

P.D.M.

Star R = 17 (U. Arg.) Scuti, 6·08 m.

The variation is somewhat irregular, and therefore columns 8 and 9 have not been completed; the residuals would be in some cases considerable.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
July 7	4843	B.	2	Ma.	c−1, d−4	5·3			
,, 16	4852	,,	,,	,,	c−5, d−5, f+10, g+10	5·5			
,, 27	4863	,,	,,	,,	c−4, d−6	5·6			
,, 31	4867	,,	1	,,	c−10, d−7·5, f+5	5·8			
Aug. 9	4876	,,	,,	,,	c−5, d−6, f+7	5·6			
,, 10	4877	,,	,,	,,	c−1, d−1, f+7·5	5·2			
,, 31	4898	,,	,,	,,	c−3, d+2, f+10	5·1			
Sept. 3	4901	,,	,,	,,	c−5, d−5, f+11	5·4			
,, 4	4902	,,	,,	,,	c−3, d−5	5·5			
1900.									
May 18	5158	,,	,,	Ke.	=g, h+3·5	6·7			
,, 24	5164	,,	,,	,,	f+0·5	6·1	...	...	Rather ruddy.
,, 29	5169	,,	,,	,,	f+1	6·0	...	...	Ruddy.
July 6	5207	,,	2	,,	=f	6·1			
,, 7	5208	,,	,,	,,	f−2·5	6·4			
,, 16	5217	,,	,,	,,	f−1	6·2			
,, 17	5218	,,	,,	Or.	g−1	6·8			
,, 18	5219	,,	1	,,	=g	6·7			
,, 18	5219	T.15	,,	Ki.	f−6, g−2	6·8			
,, 19	5220	B.	,,	Or.	=g	6·7			
,, 23	5224	,,	,,	,,	=g	6·7			
,, 24	5225	,,	,,	,,	=g	6·7			
,, 24	5225	,,	,,	Ke.	f−4, h+1	6·8			
,, 25	5226	,,	,,	Or.	=g	6·7			
,, 27	5228	,,	2	,,	=g	6·7			
,, 29	5230	,,	1	Ke.	f−7·5, h+1·5	6·9			
,, 30	5231	,,	,,	Or.	f−1·5, g+1·5	6·4			
,, 30	5231	,,	,,	Ma.	c−10, f−1·5, g+1·5	6·3			
Aug. 1	5233	,,	2	Ke.	h+1	7·0			
,, 4	5236	,,	,,	Or.	f+2	5·9			
,, 5	5237	,,	1	,,	f+3	5·8			
,, 5	5237	,,	3	Ma.	c−10, f+5	5·8			
,, 14	5246	,,	2	,,	c−7·5, f+10, g+10	5·5			
,, 14	5246	,,	,,	Ke.	=e, f+4·5	5·7	...	...	Distinctly ruddy.
,, 17	5249	,,	,,	,,	e−0·5	5·7			
,, 17	5249	,,	,,	Ma.	c−4, f+12·5, g+12·5	5·2			
,, 18	5250	,,	,,	Or.	c−2	5·2	...	...	Very red.
,, 19	5251	,,	1	Ke.	e−0·5	5·7			
,, 21	5253	T.15	,,	Ki.	f+11, g+15	5·1			
,, 22	5254	B.	,,	Or.	=e	5·0	...	...	About.
,, 22	5254	,,	,,	Ch.	c−2, d−4	5·4			

(6733) R SCUTI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Aug. 22	5254	B.	1	Mi.	=c	5·0			
,, 24	5256	,,	,,	Ch.	c−4	5·4			
,, 24	5256	,,	,,	Or.	c+1	4·9			
,, 24	5256	,,	,,	Ma.	c−1	5·1			
,, 25	5257	,,	,,	,,	c−2	5·2			
,, 26	5258	,,	,,	Ch.	c−3, d−3	5·4	...	...	*
,, 28	5260	,,	,,	Wd.	a−9, =c, f+10	5·2			
,, 29	5261	,,	,,	Ch.	c−2	5·2			
,, 30	5262	,,	,,	Ma.	c−1	5·1			
,, 30	5262	,,	2	Wd.	c−1	5·1			
Sept. 1	5264	,,	1	,,	c−1·5	5·1			
,, 2	5265	,,	2	Ma.	c−2	5·2			
,, 2	5265	,,	,,	Or.	=c	5·0	...	...	Very red.
,, 2	5265	,,	1	Ke.	c−3, e+3	5·3	...	...	Reddish.
,, 2	5265	,,	,,	Ch.	c−3, d+2	5·1			
,, 5	5268	,,	2	,,	c−3, d+1	5·2			
,, 6	5269	,,	,,	,,	c+1, =d	5·0			
,, 12	5275	,,	,,	,,	c−4	5·4			
,, 12	5275	,,	1	Ke.	c−4, =e	5·5			
,, 14	5277	,,	2	,,	c−5	5·5			
,, 14	5277	,,	1	Ma.	c−4·5	5·4			
,, 17	5280	,,	,,	Ch.	c−7, g+3	6·1			
,, 18	5281	,,	1	Ke.	c−5, f+7	5·5			
,, 19	5282	,,	2	Or.	f+4	5·7			
,, 23	5286	,,	1	Ch.	g+1, f+3	6·2			
,, 25	5288	,,	,,	,,	=f	6·1			
,, 25	5288	,,	,,	Or.	c−10, f+1	6·0			
,, 29	5292	,,	,,	Ch.	f+3	5·8			
Oct. 2	5295	,,	2	,,	f+5	5·6			
,, 3	5296	,,	,,	,,	f+4	5·7			
,, 4	5297	,,	,,	,,	f+4	5·7			
,, 5	5298	,,	,,	,,	e−3	6·0			
,, 7	5300	,,	,,	,,	e−1, f+4	5·7			
,, 8	5301	,,	,,	,,	e−4, f+6	5·8			
,, 10	5303	,,	,,	Ke.	c−1	5·1			
,, 11	5304	,,	,,	Or.	c−6, f+6	5·6	...	...	About.
,, 13	5306	,,	,,	Wd.	c−5, f+6	5·5			
,, 13	5306	,,	,,	Ke.	c−1	5·1			
,, 13	5306	,,	,,	Ch.	c−3, e+3	5·3			
,, 17	5310	,,	2	,,	c+3, d+3	4·8			
,, 17	5310	,,	1	Ma.	=c	5·0			
,, 18	5311	,,	,,	,,	c−1	5·1			
,, 21	5314	,,	2	,,	c−1	5·1			
,, 21	5314	,,	1	Ch.	c−2, =d	5·2			
,, 26	5319	,,	,,	Or.	=d	5·2			
,, 26	5319	,,	,,	Ke.	c+1	4·9	...	...	Ruddy.
,, 27	5320	,,	3	Ch.	=c	5·0			
Nov. 7	5331	,,	1	Ke.	=c	5·0	...	...	Red.
,, 9	5333	,,	,,	,,	=c	5·0			
,, 9	5333	,,	,,	Ch.	c+3	4·7			
,, 10	5334	,,	,,	,,	c+3	4·7			
,, 11	5335	,,	,,	,,	c−3	5·3			
,, 12	5336	,,	,,	Ke.	c−1	5·1			

(6733) R SCUTI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Nov. 23	5347	B.	1	Ch.	d−4	5·6			
,, 25	5349	,,	,,	,,	f+5	5·6			
,, 27	5351	,,	,,	,,	f+4	5·7			
Dec. 10	5364	,,	,,	,,	f+6	5·5			
1901.									
May 19	5524	,,	2	Ke.	=g	6·7			
,, 20	5525	,,	,,	,,	=g	6·7			
,, 20	5525	,,	1	Ch.	R+6, f+8	5·4			
,, 23	5528	,,	2	Ke.	=f	6·1	...	...	About.
,, 24	5529	,,	1	Ch.	f+6	5·5			
,, 25	5530	,,	2	Ke.	f−1·5, g+1·5	6·4			
June 6	5542	,,	,,	,,	c−7, f+5	5·7	...	..	Reddish.
,, 10	5546	,,	1	Ch.	c−6, f+6	5·6			
,, 23	5559	,,	,,	,,	c−7, f+5	5·7			
,, 27	5563	,,	2	,,	c−6, f+5	5·6			
July 5	5571	,,	,,	,,	f+4, g+8	5·8			
,, 7	5573	,,	,,	,,	f+4	5·7			
,, 7	5573	,,	1	Ke.	c−6·5, f+5·5	5·6			
,, 8	5574	,,	,,	Ch.	R+2, f+4	5·8			
,, 13	5579	,,	,,	Ke.	c−7, f+5	5·7			
,, 15	5581	,,	2	,,	c−9, f+3	5·9			
,, 15	5581	,,	1	Ch.	f+3	5·8			
,, 16	5582	,,	,,	Ma.	c−10, f+2·5	5·9			
,, 18	5584	,,	,,	Ch.	R+4, f+6	5·6			
,, 19	5585	,,	1	Ke.	=f	6·1			
,, 21	5587	,,	2	Ma.	f+1	6·0			
,, 22	5588	,,	1	Ch.	f+4	5·7			
,, 27	5593	,,	2	,,	c−6, f+5	5·6			
Aug. 2	5599	,,	,,	Ke.	c−6, f+6	5·6			
,, 4	5601	,,	,,	Ma.	c−10, f+7	5·7			
,, 6	5603	,,	,,	,,	f+7·5	5·4			
,, 6	5603	,,	1	Ch.	c−6, f+5	5·6			
,, 6	5603	,,	,,	Ke.	c−7, f+5	5·7	...	...	Reddish.
,, 10	5607	,,	,,	,,	c−7, f+5	5·7			
,, 10	5607	,,	,,	Ma.	c−6, f+6	5·6			
,, 12	5609	,,	,,	Ke.	c−5, f+7	5·5			
,, 13	5610	,,	,,	Ch.	c−7, f+4	5·7			
,, 14	5611	,,	,,	Ke.	c−6, f+6	5·6			
,, 17	5614	,,	,,	,,	c−5, f+7	5·5	...	...	Red.
,, 17	5614	,,	,,	Ma.	c−6, f+6	5·6			
,, 18	5615	,,	,,	Ch.	c−5, f+6	5·5			
,, 19	5616	,,	,,	Ke.	c−6, f+6	5·6			
,, 19	5616	,,	2	Ma.	c−6, f+6	5·6			
,, 20	5617	,,	1	,,	c−2·5	5·2			
,, 20	5617	,,	2	Ke.	c−7, f+5	5·7			
,, 21	5618	,,	1	,,	c−6, f+6	5·6	...	...	Reddish.
,, 21	5618	,,	,,	Ma.	c−2	5·2			
,, 22	5619	,,	3	,,	c−3	5·3			
,, 22	5619	,,	1	Ke.	c−6, f+6	5·6			
,, 23	5620	,,	,,	,,	c−6, f+6	5·6			
,, 23	5620	,,	3	Ma.	c−3·5	5·3			
,, 24	5621	,,	,,	Ke.	c−6, f+6	5·6			

(6733) R SCUTI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Sept. 3	5631	B.	2	Ma.	c−5	5·5			
,, 4	5632	,,	1	Ke.	c−6, f+6	5·6			
,, 5	5633	,,	,,	Ma.	c−6, f+6	5·6			
,, 9	5637	,,	,,	Ch.	c−5, f+6	5·5			
,, 13	5641	,,	3	Ma.	c−9, f+3	5·9			
,, 15	5643	,,	1	Ch.	f+3, g+5	6·0			
,, 15	5643	,,	,,	Ke.	f+1·5	6·0			
,, 16	5644	,,	,,	,,	f+1	6·0			
,, 20	5648	,,	,,	,,	=f	6·1			
,, 28	5656	,,	2	,,	f+1	6·0	...	...	Doubtful.
Oct. 2	5660	,,	1	,,	c−6, f+3	5·7			
,, 2	5660	,,	,,	Ma.	c−10, f+3	5·9			
,, 3	5661	T.7	2	LeB.	f−1, g+2	6·4			
,, 4	5662	B.	1	Ma.	c−6·5, f+3	5·7			
,, 4	5662	,,	,,	Ke.	c−7, f+5	5·7	...	...	Reddish.
,, 5	5663	,,	,,	Ch.	c−6, f+5	5·6			
,, 5	5663	,,	,,	Ke.	c−7, f+5	5·7			
,, 7	5665	,,	,,	Ke	c−6, f+6	5·6	...	...	Reddish.
,, 9	5667	,,	,,	,,	c−4·5, f+7·5	5·4	...	...	,,
,, 9	5667	,,	2	Ma.	c−7, f+6	5·6			
,, 10	5668	,,	,,	Ke.	c−1	5·1			
,, 10	5668	T.20	1	LeB.	f+2, g+4	6·1			
,, 12	5670	B.	,,	Wl.	=c	5·0			
,, 13	5671	T.20	2	LeB.	f+3	5·8			
,, 14	5672	B.	1	Wl.	=d	5·2			
,, 15	5673	,,	,,	,,	c−2, R+6	5·3			
,, 16	5674	,,	,,	,,	=c, =d	5·1			
,, 16	5674	,,	2	Ke.	=c	5·0	...	...	About.
,, 17	5675	,,	,,	Wl.	=c, =d	5·1			
,, 18	5676	,,	,,	,,	d+2	5·0			
,, 18	5676	,,	,,	Ke.	c−1	5·1	...	...	Red.
,, 19	5677	T.20	1	LeB.	f+4	5·7			
,, 19	5677	B.	2	Wl.	c−2	5·2			
,, 20	5678	,,	,,	,,	c−3	5·3			
,, 20	5678	,,	,,	Ke.	=c	5·0			
,, 21	5679	,,	,,	,,	=c	5·0			
,, 25	5683	,,	,,	Wl.	c−2, R+7	5·3			
,, 26	5684	,,	,,	,,	c+2	4·8			
,, 29	5687	,,	1	,,	c−2, R+5	5·4			
,, 31	5689	,,	,,	,,	c−3, R+5	5·4			
,, 31	5689	,,	2	Ke.	=c	5·0	...	...	Red.
,, 31	5689	T.20	,,	LeB.	f+3	5·8			
Nov. 1	5690	B.	1	Wl.	c−3, R+8	5·3			
,, 4	5693	,,	,,	,,	c−4, R+6	5·4			
,, 4	5693	,,	,,	Ke.	c−1	5·1			
,, 5	5694	,,	,,	,,	c−5, f+7	5·5			
,, 6	5695	,,	,,	Wl.	c−3, R+6	5·4			
,, 11	5700	,,	,,	,,	c−7, R+3	5·7			
,, 13	5702	,,	,,	,,	c−8, R+2	5·8			
,, 14	5703	,,	2	Ke.	c−7·5, f+4·5	5·7			
,, 15	5704	,,	,,	Wl.	c−8, R+2	5·8			
,, 16	5705	,,	,,	,,	=f	6·1			
,, 16	5705	,,	,,	Ke.	f+2·5	5·9			
,, 17	5706	,,	1	,,	c−8·5, f+3·5	5·8			

(6733) R SCUTI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Nov. 20	5709	B.	2	Wl.	f−2, g+3	6·4			
,, 25	5714	,,	,,	,,	=g	6·7	...	...	About, doubtful obs.
,, 26	5715	,,	,,	,,	g−2·5	7·0	...	...	,, ,,
,, 27	5716	,,	,,	,,	g−5	7·2	...	...	,, ,,
,, 28	5717	,,	,,	,,	g−10	7·7			
,, 30	5719	,,	,,	Ke.	g−2	6·9			
Dec. 4	5723	,,	,,	,,	g−1·5	6·9			
,, 5	5724	,,	,,	,,	g−1·5	6·9			
1902.									
Apr. 28	5868	,,	3	Ch.	f+4, g+8	5·8			
May 11	5881	,,	2	,,	f+8, g+10	5·5			
,, 12	5882	,,	1	Wl.	d−6, R+3	5·8	...	...	Ruddy.
,, 13	5883	,,	,,	,,	d−6, R+4	5·7	...	...	,,
,, 14	5884	,,	2	,,	d−8, R+5	5·8	...	...	,,
,, 15	5885	,,	,,	,,	d−10, R+3	6·0	...	...	Very ruddy.
,, 26	5896	,,	1	Ch.	c−4, =e	5·5			
,, 27	5897	,,	,,	,,	c−5, =e	5·6			
,, 27	5897	,,	,,	Wl.	d−7, R+4	5·8	...	...	Ruddy.
,, 28	5898	,,	,,	,,	d−5, R+5	5·6			
,, 31	5901	,,	,,	,,	d−4, R+6	5·5			
June 27	5928	,,	,,	Ma.	c−4·5	5·4			
July 2	5933	,,	1	Ch.	e−4	6·1			
,, 6	5937	,,	,,	,,	=e	5·7			
,, 6	5937	,,	2	Ma.	c−10, g+5	6·1			
,, 8	5939	,,	,,	,,	c−8, f+4	5·8			
,, 18	5949	,,	,,	,,	c−6, f+6	5·6			
,, 23	5954	,,	3	,,	c−10, g+5	6·1			
,, 27	5958	,,	1	,,	c−6, f+6	5·6			
Aug. 1	5963	,,	,,	,,	c−5, f+11	5·3			
,, 9	5971	,,	2	,,	c−8, f+4	5·8			
,, 14	5976	,,	,,	,,	c−4, f+8	5·4			
,, 25	5987	,,	1	,,	c−9, f+3	5·9			
Sept. 24	6017	,,	,,	,,	f−1·5, g+1·5	6·4			
,, 25	6018	,,	,,	,,	f−1, g+2	6·4			
,, 26	6019	,,	,,	,,	f−1, g+2	6·4			
Oct. 1	6024	,,	,,	,,	f−1, g+2	6·4			
,, 7	6030	,,	,,	,,	f+2	5·9			
,, 21	6044	,,	2	,,	=e	5·0			
,, 26	6049	,,	1	,,	c−5, g+7·5	5·7			
,, 28	6051	,,	,,	,,	c−5, g+10	5·6			
,, 30	6053	,,	3	,,	c−7·5, g+7·5	5·9			
Nov. 4	6058	,,	1	,,	c−10, g+4	6·2			
,, 18	6072	,,	2	,,	f−1·5, g+1·5	6·4			
1903.									
May 31	6266	,,	1	,,	f+2·5, g+2·5	6·2			
June 20	6286	,,	,,	Wl.	g−1	6·8			

(6733) R SCUTI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
June 23	6289	B.	1	Wl.	g−4	7·1			
,, 25	6291	,,	,,	,,	g−4	7·1			
,, 27	6293	,,	,,	Ma.	f−10, g−10	7·4	...	...	Faint.
July 1	6297	,,	,,	,,	g−11	7·8			
,, 24	6320	,,	,,	,,	c−4	5·4			
,, 26	6322	,,	,,	,,	c−2	5·2	...	...	Ruddy.
Aug. 18	6345	,,	,,	,,	f+1	6·0			
,, 21	6348	,,	,,	,,	=f	6·1			
,, 25	6352	,,	,,	,,	f−1·5, g+1·5	6·4			
Sept. 12	6370	,,	,,	Co.	...	*5·5*			
,, 15	6373	,,	,,	,,	c−3	5·3			
,, 18	6376	,,	,,	,,	c−3	5·3			
,, 20	6378	,,	,,	,,	c−3	5·3			
,, 25	6383	,,	,,	,,	c−3	5·3			
Oct. 12	6400	,,	,,	,,	...	*5·3*			
,, 12	6400	,,	,,	Ma.	c−6, f+6	5·6			
,, 15	6403	,,	,,	Co.	...	*6·0*			
Nov. 6	6425	,,	,,	,,	f+2	5·9			
,, 14	6433	,,	,,	,,	f+1	6·0			
,, 14	6433	,,	,,	Ma.	c−8, f+3, g+3	6·0			
,, 19	6438	,,	2	,,	f+4	5·7			
1904.									
June 3	6635	,,	...	Co.	f+3	5·8			
,, 7	6639	,,	2	Ma.	c−7·5, f+6	5·6			
,, 8	6640	,,	,,	,,	c−10, g+4	6·2	...	...	Difficult.
,, 22	6654	,,	1	,,	f+2·5	5·9			
July 3	6665	,,	,,	,,	c−6, f+6	5·6			
,, 5	6667	,,	...	Co.	f+2	5·9			
,, 8	6670	,,	1	Ma.	c−7·5, f+5·5	5·7			
,, 11	6673	,,	2	Or.	d−3, R+4	5·6			
,, 12	6674	,,	1	Ma.	c−6, f+7·5	5·5			
,, 12	6674	,,	...	Co.	...	*5·8*			
,, 13	6675	,,	1	Ma.	c+7·5, f+7	5·6			
,, 15	6677	,,	,,	,,	c−7, f+5	5·7			
,, 16	6678	,,	,,	,,	c−7·5, f+7	5·6			
,, 16	6678	,,	2	Or.	c−3, R+3	5·5			
,, 20	6682	,,	1	,,	d−5, R+5	5·6			
Aug. 1	6694	,,	2	Ma.	c−10, f+6	5·8	...	...	Difficult.
,, 2	6695	,,	1	,,	c−15, f+4	6·1	...	.	,,
,, 2	6695	,,	...	Co.	f+2	5·9			
,, 2	6695	,,	1	Or.	d−6, R+3	5·8			
,, 8	6701	,,	,,	Ma.	=R, f+3	6·0			
,, 9	6702	,,	2	,,	f+2·5	5·9			
,, 11	6704	,,	1	,,	f+4	5·7			
,, 12	6705	,,	,,	,,	f+1·5	6·0			
,, 14	6707	,,	,,	,,	f+2	5·9			
,, 14	6707	,,	...	Co.	f+2	5·9			
,, 15	6708	,,	1	Ma.	=f	6·1			

(6733) R SCUTI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Aug. 17	6710	B.	1	Ma.	=f	6·1			
,, 27	6720	,,	,,	Ch.	f−1, g+2	6·4			
,, 28	6721	,,	,,	Ma.	f−3, =g	6·6			
,, 28	6721	,,	...	Co.	f−1·5, g+1·5	6·4			
,, 28	6721	,,	2	Or.	d−10, f+2	6·1			
,, 29	6722	,,	,,	,,	f−2, g+4	6·3			
,, 29	6722	,,	1	Ma.	f−1·5, g+1·5	6·4			
,, 30	6723	,,	,,	,,	f−2, g+1	6·5			
Sept. 3	6727	,,	,,	,,	f+1	6·0			
,, 3	6727	,,	2	Or.	f−2, g+3	6·4			
,, 3	6727	,,	...	Co.	...	*6·1*			
,, 6	6730	,,	1	Ch.	f+3, g+7	5·9			
,, 16	6740	,,	2	Ma.	c−2	5·2			
,, 29	6753	T.28	,,	,,	f+5	5·6	...	...	Ruddy.
Oct. 3	6757	B.	1	,,	c−6, f+6	5·6			
,, 3	6757	,,	...	Co.	c−3	5·3			
,, 7	6761	,,	1	Ma.	c−4·5, f+7	5·4			
,, 11	6765	,,	,,	,,	c−6, f+5	5·6			
,, 13	6767	,,	,,	,,	c−6, f+6	5·6			
,, 14	6768	,,	,,	,,	c−6, f+6	5·6			
,, 29	6783	,,	2	,,	f+2·5	5·9	...	...	Difficult.
,, 29	6783	,,	...	Co.	...	*6·0*			
Nov. 14	6799	,,	1	Ma.	c−3, f+8	5·9			
,, 23	6808	,,	2	,,	c−3	5·3	...	...	Very difficult.
Dec. 5	6820	,,	...	Co.	c−4	5·4			

(6849) R AQUILÆ.

NOTES.

Star A = D.M. + 8° 3956 7·26 m. assumed.
,, B = ,, + 5° 4040 5·35 ,, P.D.M.
,, C = ,, + 9° 3979 6·93 ,, ,,
,, D = ,, + 7° 3987 7·39 ,, ,,
,, E = ,, + 6° 3989 6·38 ,, ,,

Data for mean curve :—Period, 355 d. $M-m$, 138 d. Variation, 6·5 m. to 11·8 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Oct. 23	4951	B.	1	Ma.	A+1	7·2	7·0	+ ·2	
,, 30	4958	,,	,,	,,	=1	6·1	6·8	− ·7	
,, 31	4959	T.28	2	,,	1+3	5·8	6·8	1·0	Slightly orange.

(6849) R AQUILÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Nov. 6	4965	B.	1	Ma.	1+7·5, B−4	5·6	6·6	1·0	
,, 10	4969	,,	3	,,	=B	5·4	6·5	1·1	Doubtful obs.
,, 11	4970	,,	,,	,,	B−1	5·5	6·5	1·0	
Dec. 30	5019	,,	2	,,	1−1	6·2	6·9	·7	
1900.									
June 25	5196	T.28	1	,,	=23	11·1	11·5	− ·4	
July 3	5204	,,	2	,,	...	...	11·2	...	Glimpsed < 11·1.
,, 23	5224	B.	1	,,	...	...	10·2	...	Invisible.
Aug. 17	5249	T.28	1	,,	23+1	11·0	8·7	+2·3	
,, 24	5256	B.	,,	Or.	=3	7·9	8·3	− ·4	Barely visible.*
,, 24	5256	T.28	,,	Ma.	...	...	8·3	...	Very faint > 11·1.
,, 25	5257	,,	,,	,,	13−2·5	9·7	8·2	+1·5	
,, 30	5262	,,	,,	,,	=11	9·2	7·9	1·3	
Sept. 2	5265	,,	2	,,	6−1	8·6	7·8	·8	
,, 14	5277	,,	1	,,	3+1	7·8	7·1	·7	
,, 19	5282	B.	,,	,,	A−3, 3+3	7·6	6·9	·7	
,, 21	5284	,,	,,	Or.	=A	7·3	6·9	·4	About, crimson.*
,, 25	5288	T.	,,	,,	4+4	7·5	6·7	·8	
,, 27	5290	B.	,,	Ma.	A+3, C−2	7·0	6·7	·3	
,, 29	5292	,,	,,	,,	C−1	7·0	6·6	·4	
Oct. 2	5295	,,	,,	,,	C+1	6·8	6·6	·2	
,, 10	5303	,,	2	,,	C−2	7·1	6·5	·6	
,, 12	5305	,,	1	,,	=C	6·9	6·5	·4	
,, 17	5310	,,	,,	,,	A−2, C+2	7·1	6·5	·6	
,, 18	5311	,,	,,	,,	A+3, C−1	7·0	6·5	·5	Ruddy.
,, 19	5312	T.28	2	,,	A+4	6·9	6·6	·3	
,, 21	5314	B.	1	,,	C−2, A+2	7·1	6·6	·5	
,, 21	5314	,,	,,	Or.	1−5, A+5	6·7	6·6	·1	
,, 26	5319	,,	,,	,,	1−7, A+3	6·9	6·6	·3	
,, 26	5319	,,	,,	Ma.	A+2, C−4	7·2	6·6	·6	
,, 27	5320	T.28	,,	,,	A+2·5	7·0	6·6	·4	Ruddy.
Nov. 4	5328	B.	3	,,	...	...	6·7	...	Suspected.
,, 9	5333	,,	1	,,	A−3, 3+3	7·6	6·7	·9	
,, 13	5337	T.28	2	,,	A+2	7·1	6·8	·3	
,, 15	5339	B.	1	,,	...	...	6·8	...	Glimpsed.
,, 18	5342	,,	,,	,,	...	...	6·9	...	Invisible.
1901.									
July 10	5576	T.28	3	,,	13−1	9·6	8·8	·8	
,, 16	5582	B.	2	,,	...	...	8·5	...	Invisible.
,, 18	5584	T.28	3	,,	=7, =8	8·9	8·4	·5	
,, 19	5585	B.	2	Ke.	...	...	8·3	...	Invisible.
,, 21	5587	B.	,,	Ma.	...	...	8·2	...	Suspected.
Aug. 4	5601	,,	,,	,,	...	...	7·4	...	Invisible.
,, 6	5603	T.28	,,	,,	=4	7·9	7·3	·6	Ruddy.
,, 6	5603	B.	,,	Ke.	D−6	8·0	7·3	·7	About.
,, 7	5604	T.30	,,	Ch.	3+5	7·4	7·2	·2	
,, 8	5605	,,	,,	,,	3+5	7·4	7·2	·2	

(6849) R AQUILÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 8	5605	T.28	2	Ma.	A − 3, 3+3	7·6	7·2	+ ·4	
,, 10	5607	,,	1	,,	=A	7·3	7·1	+ ·2	Ruddy.
,, 10	5607	B.	,,	Ke.	D − 5	7·9	7·1	·8	
,, 13	5610	T.30	,,	Ch.	3+6	7·3	7·0	·3	
,, 14	5611	B.	,,	Ke.	=D	7·4	6·9	·5	
,, 15	5612	T.28	,,	Ma.	A+2	7·1	6·9	·2	Ruddy.
,, 17	5614	B.	,,	Ke.	D+1	7·3	6·8	·5	
,, 17	5614	T.30	,,	Ch.	3+8	7·1	6·8	+ ·3	
,, 18	5615	T.28	,,	Ma.	A+5	6·8	6·8	0	
,, 19	5616	B.	2	,,	A+5, 1−5	6·7	6·8	− ·1	
,, 19	5616	,,	1	Ke.	1−6, D+6	6·8	6·8	0	
,, 20	5617	,,	,,	,,	1−6, D+6	6·8	6·7	+ ·1	
,, 20	5617	,,	,,	Ma.	1−5, A+5	6·7	6·7	0	
,, 21	5618	T.28	,,	,,	1−5	6·6	6·7	− ·1	
,, 21	5618	B.	,,	Ke.	1−6, D+6	6·8	6·7	+ ·1	
,, 22	5619	,,	,,	,,	1−5, D+7	6·7	6·7	0	
,, 22	5619	,,	3	Ma.	1−8, A+4	6·9	6·7	+ ·2	
,, 23	5620	,,	,,	,,	1−5, A+5	6·7	6·7	0	
,, 23	5620	,,	2	Ke.	1−5, D+7	6·7	6·7	0	
Sept. 3	5631	T.28	,,	Ma.	1−8, A+4	6·9	6·5	+ ·4	Pale yellow.
,, 4	5632	B.	,,	Ke.	1−5, D+7	6·7	6·5	·2	
,, 5	5633	,,	1	Ma.	1−8, A+4	6·9	6·5	+ ·4	
,, 5	5633	T.30	2	Ch.	1−2	6·3	6·5	− ·2	Fine orange.
,, 6	5634	B.	,,	Ke.	1−5, D+7	6·7	6·5	+ ·2	
,, 13	5641	T.28	,,	Ma.	1−8, A+4	6·9	6·5	·4	Ruddy.
,, 15	5643	B.	1	Ke.	1−6, D+6	6·8	6·6	·2	
,, 16	5644	,,	2	,,	1−7, D+5	6·9	6·6	·3	
,, 20	5648	,,	1	,,	1−6, D+6	6·8	6·6	·2	
Oct. 2	5660	,,	2	,,	D − 1·5	7·5	6·7	·8	
,, 2	5660	T.28	,,	Ma.	1−8, A+4	6·9	6·7	·2	
,, 4	5662	,,	1	,,	=A	7·3	6·7	·6	
,, 4	5662	B.	,,	Ke.	D − 1·5	7·5	6·7	·8	
,, 5	5663	,,	,,	,,	D − 3·5	7·7	6·7	1·0	
,, 5	5663	T.30	,,	Ch.	=A	7·3	6·7	·6	
,, 6	5664	B.	,,	Ma.	A − 1	7·4	6·7	·7	
,, 7	5665	,,	,,	Ke.	D − 4	7·8	6·8	1·0	
,, 9	5667	,,	,,	,,	D − 4	7·8	6·8	1·0	
,, 9	5667	,,	,,	Ma.	A − 3, 3+3	7·6	6·8	·8	
,, 16	5674	,,	,,	,,	A − 2	7·5	6·9	·6	Deep red.
,, 18	5676	T.28	2	,,	A − 2, 3+4	7·5	6·9	·6	
,, 18	5676	B.	1	Ke.	D − 5	7·9	6·9	1·0	
,, 19	5677	,,	2	Ma.	...	...	6·9	...	Invisible.
,, 19	5677	T.30	,,	Ch.	2−1, 3+5	7·3	6·9	·4	
,, 31	5689	B.	1	Ke.	...	...	7·1	...	Barely visible.
Nov. 3	5692	T.28	2	Ma.	=4	7·9	7·2	·7	
,, 4	5693	B.	1	Ke.	...	...	7·2	...	Barely visible.
,, 14	5703	T.28	3	Ma.	=3	7·9	7·5	·4	Unreliable.
,, 16	5705	,,	2	,,	=4	7·9	7·5	+ ·4	
1902.									
June 24	5925	B.	3	,,	=C	6·9	7·7	− ·8	
,, 25	5926	,,	2	,,	=C, 1−2	6·6	7·7	−1·1	Ruddy.
,, 27	5928	,,	1	,,	1+2	5·9	7·6	1·7	

(6849) R AQUILÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
June 28	5929	B.	2	Ma.	1+1	6·0	7·5	1·5	
July 3	5934	,,	1	,,	1+7·5, E−5	6·1	7·2	1·1	Pale orange.
,, 5	5936	,,	2	,,	E−4·5	6·8	7·1	·3	
,, 6	5937	,,	,,	,,	1+7·5, E−5	6·1	7·1	1·0	
,, 7	5938	,,	,,	,,	E−2·5	6·6	7·0	·4	
,, 8	5939	,,	,,	,,	E−4	6·8	7·0	·2	
,, 11	5942	,,	1	,,	=E	6·4	6·9	·5	Warm yellow.
,, 13	5944	,,	2	,,	E−3	6·7	6·8	·1	
,, 17	5948	,,	,,	,,	E−2	6·6	6·7	·1	
,, 18	5949	,,	,,	,,	E−1	6·5	6·7	·2	
,, 23	5954	,,	3	,,	E−6, 1+2	6·5	6·6	·1	
,, 27	5958	,,	1	,,	E−6, 1+4	6·4	6·5	·1	
Aug. 1	5963	,,	,,	,,	E−6, 1+3·5	6·4	6·5	·1	Warm orange.
,, 9	5971	,,	2	,,	1−4, C+4	6·5	6·6	·1	
,, 12	5974	,,	1	,,	1−3	6·4	6·6	·2	
,, 14	5976	,,	2	,,	1−3·5	6·5	6·6	− ·1	
,, 19	5981	,,	,,	,,	...	...	6·6	...	Invisible.
,, 24	5986	T.	...	Co.	...	*8·0*	6·7	+1·3	
,, 25	5987	T.28	1	Ma.	=A	7·3	6·7	·6	
Sept. 4	5997	T.	...	Co.	...	*8·0*	6·8	1·2	
,, 21	6014	,,	...	,,	...	*9·0*	7·1	1·9	
,, 24	6017	B.	1	Ma.	...	...	7·1	...	Invisible.
Oct. 21	6044	T.28	,,	,,	=7, =8	8·9	7·8	1·1	
,, 21	6044	T.	...	Co.	...	*9·5*	7·8	1·7	
,, 26	6049	T.28	1	Ma.	11−1·5, 13+1·5	9·3	8·0	1·3	
,, 30	6053	,,	,,	,,	11−1·5, 13+1·5	9·3	8·1	1·2	
Nov. 4	6058	,,	,,	,,	=13	9·5	8·3	1·2	
,, 15	6069	T.	...	Co.	...	*10·0*	8·7	1·3	
,, 28	6082	,,	...	,,	...	*11·0*	9·2	+1·8	
1903.									
Mar. 5	6179	,,	...	,,	...	*11·0*	11·6	− ·6	
May 24	6259	,,	...	,,	...	*7·5*?	7·5	0	
,, 24	6259	B.	1	Ma.	1+3·5	5·8	7·5	−1·7	
,, 31	6266	,,	,,	,,	1+4	5·7	7·1	1·4	
June 2	6268	,,	2	,,	1+5	5·6	7·0	1·4	
,, 3	6269	,,	1	,,	1+7	5·4	7·0	1·6	
,, 4	6270	,,	,,	,,	1+7	5·4	6·9	−1·5	
,, 21	6287	T.	...	Co.	...	*6·5*	6·5	0	
,, 24	6290	B.	2	Ma.	1+3	5·8	6·5	− ·7	
,, 27	6293	,,	1	,,	1+5	5·6	6·5	·9	
,, 30	6296	,,	2	Or.	=1	6·1	6·5	·4	
July 1	6297	,,	1	Ma.	1+3	5·8	6·5	− ·7	
,, 13	6309	,,	,,	,,	1−5, C−1·5	6·9	6·6	+ ·3	
,, 18	6314	,,	,,	,,	A−3, 3+3	7·6	6·5	1·1	
,, 19	6315	,,	,,	,,	A−3, 3+3	7·6	6·7	·9	
,, 23	6319	T.	...	Co.	5+6	7·7	6·7	+1·0	
,, 24	6320	B.	2	Ma.	...	...	6·7	...	Invisible.
,, 26	6322	B.	1	Ma.	=3	7·9	6·7	+1·2	About, glimpsed.

(6849) R AQUILÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C	Remarks.
1903.									
Aug. 22	6348	B.	1	Ma.	...	...	7·1	...	Invisible.
,, 25	6352	T.28	,,	,,	=4	7·9	7·2	·7	
,, 25	6352	T.	...	Co.	=7	8·9	7·2	1·7	
Sept. 12	6370	,,	...	,,	=13	9·5	7·7	1·8	
,, 18	6376	,,	...	,,	13−2	9·7	7·9	1·8	
,, 25	6383	,,	...	,,	13−2	9·7	8·1	1·6	
Oct. 15	6403	,,	...	,,	23+5	10·6	8·9	1·7	
Nov. 6	6425	T.28	1	Ma.	...	...	9·7	...	<11·1.
,, 14	6433	,,	,,	,,	...	...	10·0	...	Invisible<11·1.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	=33	[illegible]	[illegible]	[illegible]	
Dec. 11	6460	,,	...	,,	...	*11·0*	11·1	− ·1	Very uncertain obs.
1904.									
Apr. 10	6581	,,	...	,,	=1	6·1	7·9	−1·8	
May 18	6619	B.	1	Ma.	C−1, 1−3	6·7	6·5	+ ·2	
June 3	6635	T.28	,,	,,	A−3, 3+3	7·6	6·6	1·0	
,, 3	6635	T.	...	Co.	A−3, 3+3	7·6	6·6	1·0	
,, 7	6639	T.28	1	Ma.	=A	7·3	6·6	·7	
,, 22	6654	,,	2	,,	4+2·5	7·7	6·7	1·0	
July 5	6667	T.	...	Co.	5+1	8·2	6·9	1·3	
,, 8	6670	T.28	1	Ma.	=5	8·3	6·9	1·4	
,, 12	6674	,,	,,	,,	5−3, 8+3	8·6	7·0	1·6	
,, 12	6674	T.	...	Co.	5−3, 8+3	8·6	7·0	1·6	
Aug. 1	6694	T.28	1	Ma.	=7, =8	8·9	7·4	1·5	
,, 2	0095	T.	...	Co.	=13	9·5	7·5	2·0	
,, 8	6701	T.28	1	Ma.	=7	8·9	7·7	1·2	
,, 14	6707	,,	,,	,,	=7	8·9	7·8	1·1	
,, 14	6707	T.	...	Co.	13−3	9·8	7·8	2·0	
,, 17	6710	T.28	1	Ma.	13−5·5, 23+11	10·0	7·9	2·1	
,, 28	6721	,,	2	,,	7−10	9·9	8·3	1·6	
,, 28	6721	T.	,,	Co.	13−8, 23+8	10·3	8·3	2·0	
,, 29	6722	T.28	1	Ma.	=16	10·3	8·4	1·9	
,, 30	6723	,,	,,	,,	16+2	10·1	8·4	1·7	
Sept. 3	6727	,,	,,	,,	13−12, 23+4	10·7	8·5	2·2	
,, 17	6741	,,	2	,,	...	...	9·1	...	Invisible.
Oct. 3	6757	T.	...	Co.	30+2	11·4	9·7	1·7	
,, 7	6761	T.28	1	Ma.	...	...	9·9	...	Invisible.
,, 29	6783	T.	2	Co.	30−2	11·8	10·7	+1·1	

(7045) R CYGNI.

NOTE.

Data for mean curve:—Period, 426 d. $M-m$, 157 d. Variation, 7·0 m. to 13·9 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
May 8	5513	T.30	1	Ch.	4−3, 5+3, 6+3	8·8	8·2	+ ·6	
,, 12	5517	T.28	2	Ma.	4+4·5	8·2	8·0	+ ·2	Ruddy.
,, 13	5518	T.30	1	Ch.	2−3, =4	7·7	8·0	− ·3	
,, 14	5519	,,	,,	,,	2−4, 4+1, 5+3	8·1	7·9	+ ·2	
,, 14	5519	T.28	,,	Ma.	2−5	7·0	7·9	− ·9	
,, 15	5520	,,	2	,,	2−5	7·0	7·9	·9	
,, 16	5521	,,	,,	,,	2−5	7·0	7·8	− ·8	Ruddy.
,, 16	5521	T.30	1	Ch.	=4, 5+2	8·7	7·8	+ ·9	
,, 18	5523	T.28	,,	Ma.	2−4	6·9	7·8	− ·9	Very ruddy.
,, 19	5524	T.30	,,	Ch.	2−4, =4, 5+3	8·1	7·7	+ ·4	
,, 20	5525	T.28	2	Ma.	=2	6·5	7·7	− 1·2	Fine red.
,, 22	5527	,,	1	,,	2−5	7·0	7·6	− ·6	
,, 24	5529	T.30	,,	Ch.	2−5, =4	7·8	7·6	+ ·2	
,, 25	5530	T.28	2	Ma.	2−2·5	6·8	7·5	− ·7	
June 5	5541	T.30	1	Ch.	2−4	6·9	7·2	− ·3	
,, 6	5542	,,	,,	,,	2−6, 3+5	7·5	7·2	+ ·3	
,, 10	5546	,,	,,	,,	2−6	7·1	7·1	0	
,, 16	5552	,,	,,	,,	2−8	7·3	7·0	+ ·3	
,, 23	5559	,,	,,	,,	2−8	7·3	7·0	+ ·3	
July 3	5569	T.28	3	Ma.	2−2	6·7	7·1	− ·4	
,, 8	5574	,,	,,	,,	2−10, 4+10	7·6	7·1	+ ·5	
,, 11	5577	T.30	1	Ch.	4+3, 5+5	8·4	7·2	1·2	
,, 15	5581	,,	,,	,,	4+4, 5+6	8·3	7·2	1·1	
,, 18	5584	,,	,,	,,	4+6, 5+8	8·1	7·3	·8	
,, 18	5584	T.28	3	Ma.	2−10, 4−2, 5+2	8·4	7·3	1·1	Warm tint.
,, 21	5587	T.30	1	Ch.	4+4, 5+6	8·3	7·3	1·0	
,, 28	5594	,,	2	,,	4+4, 5+6	8·3	7·4	·9	Very red.
Aug. 9	5606	T.60	,,	,,	4+3, 5+4	8·5	7·7	·8	
,, 18	5615	T.30	,,	,,	4+2, 5+4, 6+6	8·5	7·9	·6	Very red.
,, 29	5626	,,	,,	,,	4+4, 5−2, =6, 14+6	9·2	8·2	1·0	,,
Sept. 4	5632	,,	,,	,,	4−5, 5−2, =6, 11+4, 13+5, 14+6	9·2	8·4	·8	,,
,, 13	5641	T.28	,,	Ma.	14+1	9·8	8·7	1·1	
,, 15	5643	T.30	1	Ch.	6−4, 8−1, =11, 14+2, 16+3	9·6	8·8	·8	Brilliant red.
Oct. 3	5661	,,	,,	,,	14−5, =23, 27+2	10·4	9·4	+1·0	
,, 4	5662	T.28	,,	Ma.	14−1·5	10·1	9·4	+ ·7	
,, 7	5665	T.60	,,	Ch.	14−5, 29+3. 30+3, 32+5	10·4	9·5	·9	
,, 16	5674	T.28	2	Ma.	14−5	10·4	9·8	·6	
,, 18	5676	,,	1	,,	14−5, =32	10·7	9·9	·8	
,, 18	5676	T.60	,,	Ch.	=31, =32	11·0	9·9	1·1	
,, 31	5689	T.160	2	,,	9−18, 56+10	11·4	10·3	1·1	

(7045) R CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Nov. 3	5692	T.28	1	Ma.	14 – 10, =32	10·9	10·5	·4	
,, 14	5703	T.67	,,	,,	=35	11·3	10·9	·4	
,, 28	5717	T.160	,,	Ch.	56+2, 59+4	11·9	11·4	·5	
Dec. 6	5725	T.95	,,	,,	56 – 3, =59	12·4	11·6	+ ·8	
,, 16	5735	,,	,,	,,	56+2, 59+3	12·0	12·0	0	Very red.
,, 18	5737	T.28	3	Ma.	...	...	12·0	...	Invisible.
,, 26	5745	T.335	1	Ch.	56 – 5, 59 – 2, =60	12·8	12·3	+ ·5	Very red.
,, 27	5746	T.160	,,	,,	56 – 3, 59 – 2, =60	12·7	12·3	·4	
,, 29	5748	T.28	,,	Ma.	...	...	12·4	...	Invisible.
1902.									
Jan. 4	5754	T.67	,,	,,	...	...	12·6	...	,, <12·0.
,, 5	5755	T.335	,,	Ch.	56 – 5, 59 – 3, =60	12·8	12·6	+ ·2	
Apr. 6	5846	,,	3	,,	60 – 5	13·6	13·7	– ·1	Hazy-looking.
,, 18	5858	,,	,,	,,	...	...	13·2	...	<12·5.
,, 27	5867	,,	,,	,,	...	...	12·8	...	<13·0.
,, 28	5868	T.160	,,	,,	60 – 4	13·5	12·7	+ ·8	
May 5	5875	,,	2	,,	60 – 3	13·4	12·3	1·1	
,, 8	5878	T.	...	Co.	...	...	12·1	...	Invisible in 6½ inch.
,, 25	5895	T.160	1	Ch.	39 – 6, 56+4	12·1	10·9	1·2	
,, 26	5896	,,	2	,,	39 – 4, 56+4	12·0	10·9	1·1	
,, 27	5897	,,	1	,,	=39, 56+8	11·6	10·8	·8	
June 7	5908	T.	...	Co.	...	*10·5*	10·0	·5	
,, 24	5925	T.160	1	Ch.	=11, 14+4	9·6	8·9	·7	
,, 25	5926	T.28	2	Ma.	14+2	9·7	8·9	·8	
,, 26	5927	,,	1	,,	14 – 1	10·0	8·8	1·2	
,, 28	5929	T.	...	Co.	...	*9·5*	8·7	·8	
,, 29	5930	T.160	1	Ch.	5 – 3, 6+3, 14+6	9·2	8·6	·6	
July 3	5934	T.28	,,	Ma.	=6	9·1	8·4	·7	
,, 6	5937	T.95	,,	Ch.	=5, 6+2, 11+4	9·1	8·3	·8	
,, 7	5938	T.28	2	Ma.	6+1·5	9·0	8·2	·8	
,, 11	5942	,,	,,	,,	4 – 4, 6+4	8·9	8·0	·9	
Aug. 24	5986	T.	...	Co.	...	*8·0*	7·0	1·0	
Sept. 3	5996	,,	...	,,	...	*8·0*	7·1	·9	
,, 24	6017	,,	...	,,	...	*8·3*	7·3	1·0	
,, 30	6023	,,	...	,,	...	*8·3*	7·5	·8	
Oct. 8	6031	T.95	2	Ch.	4+3, 5+4, 6+4, 16+6	8·8	7·6	1·2	
,, 21	6044	,,	1	,,	2 – 7, 4+1, 5+5	8·1	8·0	·1	
,, 24	6047	T.	...	Co.	...	*9·0*	8·1	·9	
,, 26	6049	T.28	1	Ma.	14+2·5	9·7	8·1	1·6	
,, 27	6050	T.95	,,	Ch.	4 – 3, 5+1	8·9	8·1	·8	
,, 30	6053	T.28	,,	Ma.	14+2	9·7	8·2	1·5	
Nov. 1	6055	T.95	,,	Ch.	4 – 2, 5+2	8·8	8·3	·5	
,, 4	6058	T.28	,,	Ma.	14+1·5	9·8	8·4	+1·4	
,, 7	6061	T.	...	Co.	...	*9·5*	8·5	+1·0	
,, 9	6063	T.28	1	Ma.	14+3·5	9·6	8·5	1·1	Ruddy.

(7045) R CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Nov. 15	6069	T.	...	Co.	...	*9·8*	8·2	1·6	
,, 28	6082	,,	...	,,	...	*10·0*	9·2	·8	
,, 28	6082	T.95	2	Ch.	14 – 3	10·2	9·2	1·0	
Dec. 4	6088	T.	...	Co.	+	*10·1*	9·4	·7	
,, 18	6102	T.120	2	Ma.	14 – 5, 31 – 2·5	10·8	9·8	1·0	
,, 20	6104	T.	...	Co.	...	*10·3*	9·9	·4	
,, 23	6107	T.28	2	Ma.	31 – 1	11·0	10·0	1·0	
,, 31	6115	T.	...	Co.	...	*11·3*	10·3	1·0	
1903.									
Jan. 3	6118	T.120	1	Ma.	...	...	10·4	...	Invisible < 10·9.
,, 23	6138	T.	...	Co.	56+5, 59+5	12·2	11·2	1·0	
Feb. 13	6159	,,	...	,,	...	...	11·9	...	Invisible.
,, 21	6167	,,	...	,,	...	...	12·1	...	,,
,, 28	6174	,,	...	,,	...	...	12·4	...	,,
Mar. 5	6179	,,	...	,,	x – 5	13·3	12·5	·8	Glimpsed, about.
,, 28	6202	,,	...	,,	...	...	13·1	...	Invisible < 13·3.
Apr. 11	6216	,,	...	,,	...	...	13·4	...	,, <13·3.
,, 24	6229	,,	...	,,	...	...	13·7	...	,,
May 15	6250	,,	...	,,	...	...	13·9	...	,,
,, 24	6259	,,	...	,,	...	...	13·9	...	,,
June 21	6287	,,	...	,,	...	...	13·1	...	,, in 6½ inch.
July 23	6319	,,	...	,,	...	...	11·2	...	,, ,,
Aug. 25	6352	,,	...	,,	59 – 4	12·5	8·9	3·6	
Sept. 2	6360	,,	...	,,	56+7	11·7	8·5	3·2	
,, 12	6370	,,	...	,,	...	*9·5*	8·0	1·5	Rough estimates.
,, 18	6376	,,	...	,,	...	*8·9*	7·8	1·1	
,, 25	6383	,,	...	,,	...	*8·8*	7·5	1·3	
Oct. 15	6403	,,	...	,,	...	*8·8*	7·1	1·7	
,, 25	6413	,,	...	,,	...	*8·8*	7·0	1·8	
Nov. 14	6433	,,	...	,,	...	*8·8*	7·2	1·6	
,, 14	6433	T.28	1	Ma.	=4	8·6	7·2	1·4	Ruddy.
,, 16	6435	,,	,,	,,	2 – 10, 4 – 3·5	8·2	7·2	1·0	
,, 17	6436	T.	,,	Or.	...	*8·4*	7·2	1·2	
,, 19	6438	T.28	2	Ma.	=4	8·6	7·3	1·3	
Dec. 11	6460	T.	...	Co.	...	*9·0*	7·7	1·3	
,, 24	6473	,,	...	,,	...	*8·8*	8·1	·7	Rough estimates.
1904.									
Jan. 3	6483	,,	...	,,	...	*8·9*	8·3	·6	
,, 10	6490	,,	...	,,	...	*9·8*	8·6	1·2	
,, 15	6495	T.28	1	Ma.	14+2·5	9·7	8·2	1·5	
Feb. 6	6517	T.	...	Co.	=12	9·7	9·5	·2	

(7045) R CYGNI—*continued*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Apr. 6	6577	T.	...	Co.	56−1, 59+1	12·2	11·6	·6	
May 18	6619	,,	...	,,	...	...	12·9	...	Invisible.
June 6	6638	,,	...	,,	...	...	13·4	...	,,
,, 7	6639	T.28	1	Ma.	...	...	13·4	...	,,
Sept. 10	6734	T.	...	Co.	...	...	11·9	...	,,
Oct. 3	6757	,,	...	,,	59−3·5, x+3·5	12·4	10·2	+2·2	
,, 13	6767	T.28	1	Ma.	...	...	9·6	...	Invisible.
,, 29	6783	T	...	Co.	9+1	9·5	8·7	+ ·8	Doubtful.
,, 29	6783	T.28	1	Ma.	14−2, 25−1, 28+1	10·4	8·7	1·7	
Nov. 3	6788	,,	,,	,,	=14	9·9	8·4	1·5	
,, 12	6797	T.	,,	Co.	14+3	9·6	7·9	1·7	
,, 14	6799	T.28	1	Ma.	5+2, 6+3	8·8	7·9	·9	Ruddy.
,, 29	6814	,,	,,	,,	2−14, 4+7	7·9	7·4	·3	
Dec. 5	6820	T.	...	Co.	...	8·0	7·2	·8	
,, 7	6822	T.28	1	Ma.	2−5, =3	7·7	7·2	+ ·5	Ruddy.
,, 13	6828	,,	,,	,,	2−1·5	6·7	7·1	− ·4	,,
,, 14	6829	,,	,,	,,	=2	6·5	7·1	·6	
,, 18	6833	,,	,,	,,	2+1	6·4	7·0	·6	Ruddy.
,, 30	6845	,,	,,	,,	2−1·5	6·7	7·0	− ·3	

(7120) χ CYGNI.

NOTE.

Data for mean curve :—Period, 406 d. $M-m$, 172 d. Variation, 5·3 m. to 13·5 m.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
May 30	4805	B.	1	Ma.	=c	4·0	5·4	− 1·4	NOTE.
,, 31	4806	,,	,,	,,	=c	4·0	5·4	1·4	P.D.M.
June 2	4808	,,	,,	,,	c−4, 1+7	4·4	5·5	1·1	P=ψ Cygni 4·83 m.
,, 3	4809	,,	,,	,,	c−5, 1+5	4·6	5·5	·9	R=φ ,, 4·74 ,,
,, 8	4814	,,	,,	,,	c−7, 1+5	4·7	5·6	·9	S=F 8 ,, 4·90 ,,
,, 9	4815	,,	2	,,	c−5, 1+5	4·6	5·6	1·0	T=F 41 ,, 4·07 ,,
,, 12	4818	,,	,,	,,	1+5	4·6	5·7	1·1	
,, 15	4821	,,	3	,,	c−7·5, 1+5	4·7	5·8	1·1	
,, 29	4835	,,	2	,,	1+1	5·0	6·2	1·2	
July 7	4843	,,	,,	,,	1+1	5·0	6·4	1·4	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
July 8	4844	B.	1	Ma.	=1	5·1	6·5	1·4	
,, 14	4850	,,	2	,,	1−7·5, g+5	5·4	6·7	1·3	
,, 16	4852	,,	,,	,,	1−8·5, g+1, 2+6	5·6	6·8	1·2	
,, 29	4865	,,	,,	,,	g−2·5, 2+1, 3+6	5·9	7·3	1·4	
,, 31	4867	,,	1	,,	1−7, 3+7	5·7	7·4	1·7	
Aug. 9	4876	,,	,,	,,	=3	6·4	7·9	1·5	
,, 10	4877	,,	,,	,,	3−1	6·5	7·9	1·4	
,, 16	4883	,,	3	,,	=0	7·3	8·2	·9	
,, 23	4890	T.28	2	,,	6+7·5	6·8	8·6	1·8	
,, 28	4895	B.	1	,,	...	...	8·9	...	Invisible.
Sept. 3	4901	T.28	,,	,,	6−2, 7+2	7·8	9·3	1·5	Ruddy.
Oct. 31	4959	,,	2	,,	...	...	12·2	...	Very faint <11·0.
Nov. 6	4965	,,	3	,,	=62	11·0	12·4	−1·4	
1900.									
May 7	5147	B.	,,	,,	...	...	6·8	...	Invisible.
,, 25	5165	,,	2	,,	...	...	5·9	...	,,
,, 29	5169	,,	...	Ke.	...	...	5·8	...	,,
June 17	5188	,,	3	Ma.	2−2, 3−0·5	6·4	5·3	+1·1	
,, 25	5196	,,	2	,,	g−3, 2+3	5·8	5·3	·5	
,, 25	5196	T.15	1	Ki.	h+2, 2+6·5, 3+7	5·6	5·3	·3	
,, 26	5197	B.	2	Ma.	=g	5·6	5·3	·3	
,, 26	5197	,,	,,	Ke.	g−2·5	5·8	5·3	·5	
,, 30	5201	,,	,,	Mi.	g−1, h+1	5·6	5·3	·3	
July 2	5203	,,	,,	Ma.	1−3, g+2	5·4	5·3	·1	Ruddy in T.
,, 3	5204	,,	,,	,,	1−4, g+2	5·4	5·3	+ ·1	
,, 5	5206	,,	,,	Ke.	1−2	5·3	5·4	− ·1	
,, 6	5207	,,	1	,,	1−2·5	5·3	5·4	·1	
,, 7	5208	,,	,,	,,	1−2·5, g+2·5	5·3	5·4	·1	
,, 10	5211	,,	2	Or.	1−2·5, g+2·5	5·3	5·4	− ·1	
,, 10	5211	T.15	,,	Ki.	1−7, 3+9, 2+11	5·4	5·4	0	
,, 15	5216	,,	,,	,,	3+8, 2+10	5·3	5·5	− ·2	
,, 15	5216	B.	,,	Or.	1−3, g+2	5·4	5·5	·1	
,, 16	5217	,,	1	,,	1−3, g+2	5·4	5·5	·1	
,, 16	5217	,,	,,	Ke.	1−3·5	5·4	5·5	·1	
,, 17	5218	T.15	,,	Ki.	2+7·5, 3+9	5·4	5·5	·1	
,, 17	5218	B.	,,	Or.	1−3, g+2	5·4	5·5	·1	
,, 18	5219	,,	,,	,,	1−3, g+2	5·4	5·5	·1	
,, 18	5219	T.15	,,	Ki.	2+8, 3+10	5·3	5·5	·2	
,, 19	5220	B.	2	Or.	1−2·5, g+2·5	5·3	5·6	·3	
,, 23	5224	,,	1	,,	1−3, g+2	5·4	5·7	− ·3	
,, 23	5224	,,	,,	Ma.	1−7, g+3	5·5	5·7	·2	
,, 24	5225	,,	,,	,,	1−8, g+2	5·6	5·7	·1	
,, 24	5225	,,	,,	Or.	1−3, g+2	5·4	5·7	·3	
,, 24	5225	,,	,,	Ke.	1−3·5	5·4	5·7	·3	
,, 28	5229	,,	,,	,,	g+3	5·3	5·8	·5	
,, 28	5229	,,	,,	Or.	1−3, g+2	5·4	5·8	·4	
,, 29	5230	,,	,,	Ma.	g+1·5	5·4	5·8	·4	
Aug. 1	5233	,,	,,	Ke.	1−3·5, g+1·5	5·4	5·9	·5	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Aug. 3	5235	B.	1	Ma.	g − 1	5·7	6·0	·3	
,, 4	5236	,,	2	Or.	1 − 3, g + 2	5·4	6·0	·6	
,, 5	5237	,,	3	Ma.	g − 0·5	5·6	6·0	·4	
,, 5	5237	,,	2	Ke.	= g	5·6	6·0	·4	Doubtful.
,, 6	5238	,,	,,	Ma.	= g	5·6	6·1	·5	
,, 12	5244	,,	,,	,,	g − 2, 2 + 1	5·9	6·3	− ·4	
,, 12	5244	,,	,,	Mi.	= 3	6·4	6·3	+ ·1	
,, 13	5245	,,	,,	,,	= 3	6·4	6·3	+ ·1	
,, 13	5245	,,	,,	Ma.	= 2	6·1	6·3	− ·2	
,, 14	5246	,,	,,	,,	2 − 1	6·2	6·3	− ·1	
,, 14	5246	,,	,,	Mi.	3 − 1	6·5	6·3	+ ·2	
,, 14	5246	,,	1	Ke.	g − 3	5·9	6·3	− ·4	
,, 15	5247	,,	,,	Mi.	= 3	6·4	6·4	0	
,, 15	5247	,,	,,	Ma.	2 − 1, 3 + 3	6·1	6·4	− ·3	
,, 17	5249	,,	,,	,,	2 − 3, 3 + 2	6·3	6·4	·1	
,, 18	5250	,,	,,	,,	2 − 3, 3 + 1	6·3	6·5	− ·2	
,, 18	5250	,,	2	Or.	3 − 2	6·6	6·5	+ ·1	
,, 22	5254	,,	1	,,	= 3	6·4	6·6	− ·2	About.
,, 22	5254	,,	2	Ma.	2 − 3, 3 − 1	6·4	6·6	·2	
,, 22	5254	,,	1	Mi.	3 − 1	6·5	6·6	− ·1	
,, 24	5256	,,	,,	Ma.	3 − 3	6·7	6·7	0	
,, 25	5257	,,	,,	,,	3 − 3	6·7	6·7	0	
,, 26	5258	,,	,,	,,	3 − 1·5	6·6	6·8	− ·2	
,, 28	5260	,,	,,	Ke.	3 − 1	6·5	6·9	·4	
,, 30	5262	,,	,,	Ma.	3 − 5	6·9	7·0	− ·1	
Sept. 2	5265	T.28	2	,,	6 + 3·5	7·2	7·1	+ ·1	
,, 4	5267	B.	,,	,,	...	...	7·1	...	Invisible.
,, 12	5275	,,	1	Ke.	...	...	7·5	...	< 8·0
,, 14	5277	T.28	,,	Ma.	13 + 1·5	8·5	7·6	·9	
,, 25	5288	T.	,,	Or.	18 + 3	9·0	8·2	·8	
,, 27	5290	B.	,,	Ma.	...	...	8·3	...	Invisible.
,, 29	5292	T.28	,,	,,	20 + 2	9·2	8·4	+ ·8	
Oct. 18	5311	,,	,,	,,	= 20	9·4	9·5	− ·1	
,, 19	5312	,,	2	,,	20 − 2	9·6	9·5	+ ·1	
,, 27	5320	,,	1	,,	= 27	9·9	10·0	− ·1	
,, 27	5320	T.	,,	Or.	...	...	10·0	...	< 10·2.
Nov. 13	5337	T.28	2	Ma.	...	...	10·9	...	< 10·5.
,, 17	5341	,,	1	,,	62 − 1	11·1	11·1	0	
Dec. 13	5367	,,	,,	,,	...	...	12·2	...	Invisible.
1901.									
May 11	5516	,,	,,	,,	= 58, = 62	11·0	9·1	+ 1·9	
,, 15	5520	,,	2	,,	= 27	9·9	8·8	1·1	
,, 18	5523	,,	1	,,	...	...	8·5	...	> 10·9.
,, 20	5525	T.30	,,	Ch.	...	...	8·3	...	Invisible in 2 inch.
,, 22	5527	T.28	,,	Ma.	= 34	10·1	8·2	1·9	
,, 25	5530	,,	2	,,	= 34	10·1	8·1	2·0	
June 16	5552	T.30	1	Ch.	9 − 5, 13 − 2, 16 + 1, 21 + 5	8·9	6·8	2·1	Slightly ruddy.
,, 23	5559	,,	,,	,,	9 − 3, 13 + 4, 16 + 6	8·5	6·5	2·0	Light orange.
,, 26	5562	,,	,,	,,	9 + 2, 13 + 6	8·1	6·3	1·8	,, ,,

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
June 27	5563	T.30	1	Ch.	6−3, 9+5	7·9	6·3	1·6	Red.
July 3	5569	T.28	3	Ma.	6−2, 7+4	7·7	6·0	1·7	Slightly ruddy.
,, 4	5570	T.30	2	Ch.	6−2, 7+3	7·8	6·0	1·8	
,, 7	5573	,,	1	,,	6+3	7·2	5·9	1·3	
,, 7	5573	B.	,,	Ke.	...	...	5·9	...	Invisible.
,, 8	5574	T.28	3	Ma.	6−1·5	7·7	5·9	1·8	Ruddy.
,, 10	5576	,,	2	,,	6+2·5	7·2	5·8	1·4	
,, 13	5579	B.	1	Ke.	3−4	6·8	5·7	1·1	
,, 14	5580	,,	,,	,,	3−4	6·8	5·7	1·1	
,, 15	5581	,,	2	,,	3−4·5	6·9	5·6	1·3	
,, 15	5581	,,	,,	Ma.	3−1·5	6·6	5·6	1·0	
,, 15	5581	T.30	1	Ch.	4+2, 6+5	6·8	5·6	1·2	
,, 16	5582	B.	2	Ma.	3−1	6·5	5·6	·9	
,, 17	5583	,,	3	,,	3−1	6·5	5·6	·9	
,, 18	5584	,,	,,	,,	3−1	6·5	5·6	·9	Warm hue.
,, 18	5584	T.30	1	Ch.	2−6, 3−3	6·7	5·6	1·1	
,, 19	5585	B.	2	Ke.	2−2	6·3	5·5	·8	
,, 21	5587	T.30	1	Ch.	=2	6·1	5·5	·6	
,, 21	5587	B.	2	Ma.	g−3, 2+3	5·8	5·5	·3	
,, 22	5588	T.30	1	Ch.	2−1, 3+3	6·1	5·5	+ ·6	
,, 27	5593	B.	2	,,	g+5, 2+7	5·2	5·4	− ·2	
,, 28	5594	,,	,,	,,	2+6, 3+9	5·5	5·3	+ ·2	
,, 31	5597	,,	,,	Ma.	=1	5·1	5·3	− ·2	Quite brilliant.
Aug. 1	5598	,,	,,	,,	1+1	5·0	5·3	·3	Golden yellow.
,, 2	5599	,,	,,	,,	1+2	4·9	5·3	·4	
,, 2	5599	,,	,,	Ke.	c−6, 1+4	4·7	5·3	·6	Orange.
,, 4	5601	,,	,,	Ma.	1+2	4·9	5·3	·4	
,, 4	5601	,,	1	Ch.	1+4, =P	4·7	5·3	·6	
,, 5	5602	,,	,,	Pe.	c−6, 1+1, R+2	4·7	5·3	·6	
,, 6	5603	,,	,,	,,	c−5, 1+1	4·8	5·3	·5	
,, 6	5603	,,	,,	Ke.	c−5, 1+5	4·6	5·3	·7	
,, 6	5603	,,	,,	Ch.	c−5, P+3	4·5	5·3	·8	
,, 6	5603	,,	2	Ma.	1+3	4·8	5·3	·5	
,, 7	5604	,,	1	Pe.	c−5, 1+2	4·7	5·3	·6	
,, 7	5604	,,	,,	Ch.	P+3	4·5	5·3	·8	
,, 8	5605	,,	,,	Pe.	c−4, 1+3	4·6	5·3	·7	
,, 8	5605	,,	,,	Ke.	c−6, 1+4	4·7	5·3	·6	Orange.
,, 8	5605	,,	2	Ma.	c−5, 1+5	4·6	5·3	·7	
,, 9	5606	,,	1	Ch.	P+2	4·6	5·3	− ·7	
,, 10	5607	,,	2	Pe.	c−6, 1+2	4·8	5·3	− ·5	
,, 10	5607	,,	1	Ke.	c−4, 1+6	4·5	5·3	·8	Orange.
,, 10	5607	,,	,,	Ma.	c−5, 1+5	4·6	5·3	·7	
,, 12	5609	,,	,,	Ke.	c−4, 1+6	4·5	5·3	·8	
,, 13	5610	,,	2	Pe.	c−6, 1+2	4·8	5·3	·5	
,, 13	5610	,,	1	Ch.	P+4	4·4	5·3	·9	Reddish.
,, 13	5610	,,	,,	Oa.	c−5, 1+5	4·6	5·3	·7	
,, 14	5611	,,	2	Pe.	c−4, 1+3	4·6	5·3	·7	
,, 14	5611	,,	1	Ke.	c−3, 1+7	4·4	5·3	·9	
,, 15	5612	,,	,,	Pe.	c−3, 1+4	4·5	5·4	·9	
,, 15	5612	,,	2	Oa.	c+5	3·5	5·4	1·9	*
,, 15	5612	N.E.	1	Ma.	c−3	4·3	5·4	1·1	
,, 15	5612	B.	,,	Ch.	d−1, P+4	4·5	5·4	·9	Very red.
,, 16	5613	,,	,,	Oa.	c−3	4·3	5·4	1·1	
,, 17	5614	,,	,,	,,	c+5	3·5	5·4	1·9	*

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 17	5614	B.	1	Pe.	c−3, 1+4	4·5	5·4	·9	
,, 17	5614	,,	,,	Ke.	c−2·5, 1+7·5	4·3	5·4	1·1	
,, 17	5614	N.E.	,,	Ma.	c−3·5, 1+6·5	4·4	5·4	1·0	
,, 18	5615	,,	,,	,,	c−2·5	4·3	5·4	1·1	
,, 18	5615	B.	,,	Oa.	c−4	4·4	5·4	1·0	
,, 18	5615	,,	,,	Pe.	c−4, 1+3	4·6	5·4	·8	
,, 18	5615	,,	,,	Ch.	c−4, P+5	4·4	5·4	1·0	Very red.
,, 19	5616	N.E.	,,	Ma.	c−6, 1+4	4·7	5·4	·7	
,, 19	5616	B.	2	Pe.	c−5, 1+5	4·6	5·4	·8	
,, 19	5616	,,	1	Ke.	c−3·5, 1+6·5	4·4	5·4	1·0	
,, 19	5616	,,	3	Oa.	c−2	4·2	5·4	1·2	
,, 19	5616	N.E.	...	Mi.	c−1	4·1	5·4	1·3	
,, 20	5617	,,	...	,,	=R	4·7	5·4	·7	
,, 20	5617	B.	1	Oa.	c−5	4·5	5·4	·9	
,, 20	5617	,,	,,	Ke.	c−5, 1+5	4·6	5·4	·8	
,, 20	5617	,,	,,	Pe.	c−6, 1+4	4·7	5·4	·7	
,, 21	5618	,,	,,	,,	c−6, 1+3	4·7	5·4	·7	
,, 21	5618	N.E.	,,	Ma.	c−5, 1+5	4·6	5·4	·8	
,, 21	5618	B.	,,	Oa.	c−5	4·5	5·4	·9	
,, 21	5618	,,	,,	Ke.	c−5, 1+5	4·6	5·4	·8	
,, 22	5619	,,	,,	,,	c−5, 1+5	4·6	5·4	·8	
,, 22	5619	,,	2	Pe.	c−6, 1+3	4·7	5·4	·7	
,, 22	5619	,,	1	Oa.	c+1·5	3·9	5·4	1·5	*
,, 22	5619	N.E.	3	Ma.	c−7·5	4·8	5·4	·6	
,, 23	5620	B.	,,	,,	c−3·5, 1+6·5	4·4	5·5	1·1	
,, 23	5620	,,	2	Oa.	c−6·5	4·7	5·5	·8	
,, 23	5620	,,	1	Ke.	c−5, 1+5	4·6	5·5	·9	
,, 24	5621	,,	2	,,	c−4, 1+6	4·5	5·5	1·0	
,, 24	5621	,,	1	Oa.	c−6·5	4·7	5·5	·8	
,, 25	5622	,,	2	Pe.	c−6, 1+3	4·7	5·5	·8	
,, 25	5622	,,	,,	Ke.	c−4, 1+6	4·5	5·5	1·0	
,, 26	5623	,,	1	,,	c−5, 1+5	4·6	5·5	·9	
,, 26	5623	,,	,,	Oa.	c−7	4·7	5·5	−·8	
,, 27	5624	,,	2	Pe.	e−1, 1+2	4·8	5·5	−·7	
,, 28	5625	,,	,,	,,	e−1, 1+3	4·8	5·6	·8	
,, 29	5626	,,	,,	,,	e−1, 1+3	4·8	5·6	·8	
,, 30	5627	,,	,,	,,	e−1, 1+3	4·8	5·6	·8	
,, 31	5628	,,	1	Ke.	c−4, 1+6	4·5	5·6	1·1	
Sept. 1	5629	,,	,,	,,	c−4, 1+6	4·5	5·6	1·1	
,, 2	5630	,,	2	Pe.	e−2, 1+2	4·9	5·7	·8	
,, 3	5631	,,	1	Ke.	c−5, 1+5	4·6	5·7	1·1	
,, 3	5631	,,	2	Ma.	c−6, 1+4	4·7	5·7	1·0	
,, 4	5632	,,	1	Ke.	c−6, 1+4	4·7	5·7	1·0	
,, 4	5632	,,	2	Pe.	e−1, 1+3	4·8	5·7	·9	
,, 5	5633	,,	,,	,,	e−2, 1+2	4·9	5·7	·8	
,, 5	5633	,,	1	Ma.	c−6, 1+4	4·7	5·7	1·0	
,, 6	5634	,,	,,	Ke.	c−6, 1+4	4·7	5·8	1·1	
,, 7	5635	,,	,,	Pe.	e−3, 1+1	5·0	5·8	·8	
,, 8	5636	,,	2	,,	1+1	5·0	5·8	·8	
,, 9	5637	,,	1	,,	=1	5·1	5·9	·8	
,, 9	5637	,,	,,	Ch.	P+2, 1+3, S+2	4·7	5·9	1·2	Red.
,, 10	5638	N.E.	...	Mi.	1−1	5·2	5·9	·7	
,, 12	5640	,,	...	,,	1−1	5·2	5·9	·7	
,, 12	5640	B.	2	Pe.	1−2	5·3	5·9	·6	
,, 13	5641	,,	1	,,	1−1, g+4	5·2	6·0	·8	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Sept. 13	5641	B.	2	Ma.	1+1·5	4·9	6·0	1·1	
,, 14	5642	,,	1	Pe.	1−1, g+4	5·2	6·0	·8	
,, 14	5642	,,	,,	Ke.	c−7, 1+3	4·8	6·0	1·2	
,, 15	5643	,,	,,	,,	c−7, 1+3	4·8	6·0	1·2	
,, 15	5643	,,	,,	Pe.	1−2, g+4	5·2	6·0	·8	
,, 15	5643	N.E.	...	Mi.	1−1	5·2	6·0	·8	
,, 15	5643	B.	2	Ch.	1−1	5·2	6·0	·8	
,, 16	5644	,,	1	Ke.	c−8, 1+2	4·9	6·1	1·2	
,, 16	5644	,,	,,	Pe.	1−3, g+1	5·4	6·1	·7	
,, 17	5645	,,	,,	,,	1−3, g+2	5·4	6·1	·7	
,, 18	5646	,,	,,	,,	1−3, g+2	5·4	6·1	·7	
,, 19	5647	,,	,,	,,	1−4, g+1	5·5	6·2	·7	
,, 20	5648	,,	,,	Ke.	1−1	5·2	6·2	1·0	
,, 22	5650	,,	2	Pe.	1−5, g−1	5·6	6·2	·6	
,, 23	5651	,,	,,	Ke.	1−5, 2+5	5·6	6·3	·7	
,, 25	5653	,,	...	Mi.	=h	5·7	6·3	·6	
,, 25	5653	F.	1	Ch.	1−6, h+1, 2+5, 3+8	5·6	6·3	·7	Red.
Oct. 2	5660	B.	,,	Ma.	2−1, 3+2	6·2	6·6	·4	Ruddy.
,, 2	5660	,,	,,	Ke.	2−1, 3+2	6·2	6·6	·4	
,, 3	5661	,,	,,	Pe.	2−1, 3+2	6·2	6·7	·5	
,, 3	5661	F.	,,	Ch.	2−2, =3	6·3	6·7	·4	Very red.
,, 4	5662	B.	,,	Ma.	2−1·5, 3+1·5	6·2	6·7	·5	
,, 4	5662	,,	,,	Ke.	2−1·5, 3+1·5	6·2	6·7	·5	
,, 5	5663	,,	,,	Pe.	2−1, 3+3	6·1	6·7	·6	
,, 5	5663	,,	...	Mi.	=2	6·1	6·7	·6	
,, 6	5664	,,	...	,,	=2	6·1	6·8	− ·7	
,, 6	5664	,,	1	Pe.	2−2, 3+2	6·2	6·8	− ·6	
,, 6	5664	,,	,,	Ke.	2−1·5, 3+1·5	6·2	6·8	·6	
,, 6	5664	,,	,,	Ma.	=3	6·4	6·8	·4	
,, 7	5665	F.	,,	Ch.	2−4, =3	6·4	6·8	·4	Ruddy.
,, 9	5667	B.	...	Mi.	3−1	6·5	6·9	·4	
,, 9	5667	,,	1	Ke.	2−2, 3+1	6·3	6·9	·6	
,, 9	5667	,,	2	Ma.	=3	6·4	6·9	·5	
,, 10	5668	,,	1	Ke.	3−0·5	6·5	7·0	·5	
,, 12	5670	,,	,,	,,	=3	6·4	7·0	·6	
,, 13	5671	T.20	,,	LeB.	2−5, 3−3	6·6	7·1	·5	
,, 15	5673	,,	,,	,,	2−5, 3−2	6·6	7·2	·6	
,, 16	5674	B.	,,	Ke.	=3	6·4	7·2	·8	
,, 16	5674	,,	2	Ma.	3−4	6·8	7·2	·4	
,, 18	5676	,,	1	,,	3−6	7·0	7·3	·3	Pale orange red.
,, 18	5676	,,	,,	Ke.	3−2·5	6·7	7·3	·6	
,, 18	5676	T.30	,,	Ch.	3−6, 6+8	6·9	7·3	·4	
,, 19	5677	T.20	,,	LeB.	0+4, 6+6	6·9	7·3	·4	
,, 19	5677	B.	,,	Ma.	3−7·5	7·2	7·3	·1	
,, 21	5679	,,	,,	Ke.	3−3·5	6·8	7·4	·6	
,, 22	5680	,,	2	Ma.	3−10	7·4	7·5	·1	
,, 30	5688	T.20	,,	LeB.	6+2	7·3	7·9	·6	Date doubtful.
,, 31	5689	B.	1	Ke.	3−10, =6	7·5	7·9	·4	
,, 31	5689	T.28	,,	Ma.	6+2	7·3	7·9	·6	
,, 31	5689	T.30	2	Ch.	6+6, 7+8	7·1	7·9	·8	
Nov. 3	5692	T.67	1	Ma.	6+2	7·3	8·1	− ·8	
,, 4	5693	B.	,,	Ke.	...	...	8·1	...	Just visible.
,, 10	5699	T.20	2	LeB.	9−3, =13	8·7	8·4	+ ·3	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Nov. 14	5703	T.20	2	LeB.	13 – 1	8·8	8·7	+ ·1	
,, 14	5703	T.28	,,	Ma.	6 – 4·5, 7 + 1·5	8·0	8·7	– ·7	
,, 15	5704	T.30	,,	Ch.	6 – 3, 7 + 3	7·8	8·7	·9	Deep red.
,, 16	5705	T.28	,,	Ma.	6 – 5, 7 + 1	8·0	8·8	– ·8	
,, 16	5705	T.20	3	LeB.	13 – 2	8·9	8·8	+ ·1	
,, 17	5706	,,	2	,,	13 – 4, 18 + 2	9·1	8·9	·2	
,, 21	5710	,,	,,	,,	13 – 2, = 16, 18 + 1, 21 + 4	9·1	9·0	+ ·1	
,, 22	5711	,,	3	,,	16 – 1, 18 + 2	9·1	9·2	– ·1	
,, 23	5712	,,	,,	,,	16 – 2, = 18, 27 + 5	9·3	9·2	+ ·1	
,, 23	5712	T.30	,,	Ch.	= 9	8·4	9·2	– ·8	
,, 25	5714	T.28	2	Ma.	7 – 6, 9 – 5, 18 + 5, 20 + 6	8·8	9·3	·5	
,, 28	5717	T.30	1	Ch.	9 – 8, 20 + 2	9·2	9·5	– ·3	
,, 29	5718	T.20	,,	LeB.	16 – 4, 18 – 3, 27 + 2	9·6	9·5	+ ·1	
Dec. 7	5726	,,	,,	,,	27 – 3, = 36, = 37	10·2	10·0	·2	
,, 8	5727	,,	,,	,,	27 – 3, = 36, = 37	10·2	10·1	+ ·1	
,, 8	5727	T.95	,,	Ch.	18 – 3, 20 – 2	9·6	10·1	– ·5	Ruddy.
,, 16	5735	,,	,,	,,	14 – 2, = 18, 20 + 3	9·2	10·5	1·3	Red.
,, 18	5737	T.20	2	LeB.	29 – 4	10·1	10·6	·5	
,, 18	5737	T.28	,,	Ma.	20 – 4, 34 + 2	9·8	10·6	·8	
,, 26	5745	T.95	1	Ch.	51 – 3, = 54, 59 + 4	10·7	11·0	·3	
,, 29	5748	T.28	,,	Ma.	= 27	9·9	11·2	– 1·3	
1902.									
Jan. 4	5754	T.28	2	Ma.	27 – 2·5	10·1	11·4	– 1·3	
,, 5	5755	,,	1	,,	= 51	10·5	11·5	1·0	
,, 28	5778	T.	...	Co.	...	*11·0*	12·4	1·4	Doubtful.
Apr. 18	5858	T.95	3	Ch.	...	...	13·3	...	< 11·0.
,, 27	5867	,,	,,	,,	...	...	13·0	...	< 11·0.
,, 28	5868	,,	2	,,	101 – 4, = 104	12·7	12·9	·2	
May 5	5875	,,	,,	,,	92 – 2, = 98	12·5	12·7	·2	
,, 8	5878	T.	...	Co.	...	...	12·5	...	Invisible.
,, 13	5883	T.28	1	Ma.	...	...	12·3	...	,,
,, 25	5895	T.95	3	Ch.	= 67	11·3	11·4	·1	
,, 26	5896	,,	,,	,,	= 67	11·3	11·4	·1	
,, 27	5897	,,	1	,,	59 – 4, = 63, 64 + 2, 67 + 5	11·0	11·1	– ·1	
June 7	5908	T.	...	Co.	...	*11·0*	10·3	+ ·7	
,, 24	5925	T.95	1	Ch.	13 – 3, = 16	9·0	8·8	·2	
,, 25	5926	T.28	,,	Ma.	20 – 2, 27 + 1	9·7	8·7	1·0	
,, 28	5929	T.	...	Co.	...	*9·8*	8·5	1·3	
,, 29	5930	T.95	1	Ch.	= 16, 20 + 4	9·0	8·4	·6	
July 3	5934	T.28	,,	Ma.	20 – 1	9·5	8·2	1·3	
,, 5	5936	T.	,,	Pe.	16 – 1, 18 + 2	9·1	8·1	1·0	
,, 6	5937	T.95	,,	Ch.	13 – 3, = 16, 20 + 3	9·0	7·9	1·1	
,, 7	5938	T.28	2	Ma.	16 + 1, 20 – 2	9·3	7·9	1·4	
,, 11	5942	,,	1	,,	= 20	9·4	7·7	1·7	Rather ruddy.
,, 27	5958	,,	,,	,,	20 – 2	9·6	6·8	2·8	
Aug. 1	5963	,,	,,	,,	= 20	9·4	6·6	2·8	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Aug. 9	5971	B.	1	Ma.	...	...	6·2	...	Invisible.
,, 12	5974	T.28	2	,,	6 − 3, 7 + 3	7·8	6·1	+ 1·7	Ruddy.
,, 14	5976	B.	,,	,,	...	...	6·0	...	Invisible.
,, 24	5986	T.	...	Co.	...	*5·5*	5·7	− ·2	
,, 25	5987	B.	2	Oa.	1 − 1·5	5·2	5·7	·5	
,, 25	5987	,,	1	Ma.	1 − 1	5·2	5·7	·5	
,, 26	5988	,,	2	Oa.	1 − 3	5·4	5·6	·2	
,, 29	5991	,,	,,	,,	= 1	5·1	5·5	·4	
Sept. 1	5994	,,	,,	,,	1 + 5	4·6	5·4	·8	
,, 1	5994	T.	...	Co.	...	*5·0*	5·4	·4	
,, 6	5999	B.	1	Pe.	c − 3, = d, 1 + 6	4·4	5·4	1·0	
,, 8	6001	,,	,,	,,	c − 2, d + 2	4·2	5·3	1·1	
,, 10	6003	,,	2	,,	c − 2, e + 2	4·4	5·3	·9	
,, 10	6003	N.E.	,,	LeB.	c − 3	4·3	5·3	1·0	
,, 12	6005	,,	,,	,,	c − 2	4·2	5·3	1·1	
,, 12	6005	B.	,,	Pe.	c − 3, d + 2	4·3	5·3	1·0	
,, 13	6006	,,	,,	,,	c − 3, d + 2	4·3	5·3	1·0	
,, 15	6008	T.	...	Co.	...	*4·8*	5·3	·5	
,, 18	6011	B.	2	Ma.	c − 1	4·1	5·3	1·2	
,, 18	6011	,,	1	Pe.	c − 3	4·3	5·3	1·0	
,, 23	6016	B.	,,	Ma.	= c	4·0	5·4	1·4	
,, 24	6017	N.E.	,,	,,	c − 2	4·2	5·4	1·2	
,, 24	6017	...	...	Co.	...	*4·6*	5·4	·8	
,, 25	6018	N.E.	1	Ma.	c − 2	4·2	5·4	− 1·2	
,, 26	6019	N.E.	1	Ma.	c − 2	4·2	5·4	− 1·2	
,, 29	6022	,,	,,	,,	c − 1·5	4·2	5·4	1·2	
,, 30	6023	...	...	Co.	...	*4·9*	5·4	·5	
Oct. 1	6024	N.E.	1	Ma.	c − 2	4·2	5·4	1·2	
,, 1	6024	,,	,,	LeB.	c − 2·5	4·3	5·4	1·1	
,, 3	6026	,,	,,	Ma.	c − 3	4·3	5·5	1·2	
,, 4	6027	,,	2	,,	c − 3·5	4·4	5·5	1·1	
,, 7	6030	,,	,,	,,	c − 5, 1 + 5	4·6	5·6	1·0	
,, 8	6031	T.95	1	Ch.	e − 4, 1 + 6, S + 5	4·6	5·6	1·0	*
,, 9	6032	N.E.	2	LeB.	c − 3	4·3	5·6	1·3	
,, 10	6033	B.	1	Ch.	d + 4, P + 5	4·2	5·6	1·4	
,, 11	6034	,,	2	Ma.	c − 6, 1 + 5	4·6	5·6	1·0	
,, 14	6037	,,	1	Ch.	d − 2, = e	4·6	5·7	1·1	
,, 21	6044	,,	,,	,,	= P, S + 3	4·7	5·9	1·2	
,, 21	6044	,,	,,	Ma.	1 + 2	4·9	5·9	1·0	
,, 21	6044	N.E.	,,	LeB.	c − 5, = 1	4·8	5·9	1·1	
,, 23	6046	T.7	,,	,,	c − 6·5, 1 − 2	5·0	6·0	1·0	*
,, 24	6047	...	...	Co.	...	*5·0*	6·0	1·0	
,, 26	6049	B.	1	Ma.	1 + 1	5·0	6·1	1·1	
,, 27	6050	,,	,,	,,	= 1	5·1	6·1	1·0	
,, 27	6050	,,	,,	Ch.	P − 3, 1 − 3	5·2	6·1	·9	
,, 29	6052	,,	,,	,,	P − 4, 1 − 5	5·4	6·2	·8	
,, 30	6053	,,	,,	Ma.	1 − 3, g + 1 5	5·4	6·2	·8	
Nov. 1	6055	,,	3	Ch.	1 − 3	5·4	6·2	·8	
,, 4	6058	,,	1	Ma.	= g	5·6	6·4	·8	
,, 7	6061	,,	,,	Ch.	1 − 6, g + 3	5·5	6·5	1·0	
,, 8	6062	,,	,,	Ma.	g − 1	5·7	6·5	·8	Date doubtful.
,, 9	6063	,,	2	,,	g − 3, 2 + 2	5·9	6·5	·6	
,, 10	6064	,,	1	Ch.	1 − 8, 3 + 5, 2 + 5	5·8	6·6	·8	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Nov. 12	6066	B.	1	Ch.	2+1, 3+3	6·0	6·7	·7	
,, 15	6069	T.	...	Co.	...	*6·6*	6·8	·2	
,, 18	6072	B.	2	Ma.	2−5, 3+1	6·4	6·9	·5	
,, 28	6082	,,	,,	Ch.	3−4	6·8	7·3	− ·5	
,, 28	6082	T.	...	Co.	...	*7·3*	7·3	0	
Dec. 4	6088	,,	...	,,	...	*8·0*	7·6	+ ·4	
,, 18	6102	T.28	1	Ma.	6−5, 7+1	8·0	8·3	− ·3	Ruddy.
,, 23	6107	,,	2	,,	6−3·5	7·9	8·6	− ·7	
,, 26	6110	T.	...	Co.	...	*9·0*	8·8	+ ·2	
,, 31	6115	,,	...	,,	...	*9·6*	9·1	·4	
1903.									
Jan. 3	6118	T.28	1	Ma.	20−1	9·5	9·3	+ ·2	
Mar. 5	6179	T.	...	Co.	...	*11·0*	12·3	−1·3	
Apr. 11	6216	,,	...	,,	...	...	13·2	...	Invisible < 13·0.
May 20	6255	B.	1	Ma.	...	...	13·4	...	,,
,, 24	6259	T.	...	Co.	...	...	13·4	...	,,
Sept. 11	6369	B.	...	Ma.	...	...	6·6	...	,,
,, 26	6384	T.	2	Or.	...	...	5·9	...	,, < 10·0.
Oct. 12	6400	B.	1	Ma.	2+2	5·9	5·4	+ ·5	
,, 12	6400	T.	...	Co.	1−5, 2+5	5·6	5·4	+ ·2	
,, 15	6403	,,	...	,,	2+1	6·0	5·4	+ ·6	
,, 16	6404	B.	1	Ma.	1−5, 2+5	5·6	5·4	·2	
,, 21	6409	,,	,,	,,	1−3, g+1·5	5·4	5·3	+ ·1	
,, 22	6410	T.	...	Co.	1−2	5·3	5·3	0	
,, 25	6413	,,	...	,,	1+1	5·0	5·3	− ·3	
,, 30	6418	B.	1	Ma.	1+2·5	4·8	5·3	− ·5	
Nov. 4	6423	,,	,,	,,	1−5, 2+5	5·6	5·4	+ ·2	
,, 6	6425	,,	,,	,,	1−1, 2+9	5·2	5·4	− ·2	
,, 6	6425	N.E.	2	Co.	1+1	5·0	5·4	·4	
,, 7	6426	B.	1	Ma.	1−1, g+3	5·2	5·4	·2	
,, 14	6433	,,	,,	,,	1−1, g+4	5·2	5·5	·3	Fiery red.
,, 14	6433	...	...	Co.	1−0·5	5·1	5·5	·4	
,, 15	6434	B.	1	Ma.	1−1, g+4	5·2	5·5	·3	
,, 16	6435	,,	,,	,,	1−1, g+4	5·2	5·5	·3	
,, 17	6436	,,	,,	Or.	=1	5·1	5·6	·5	Red.
,, 18	6437	,,	,,	Ma	1−1, g+4	5·2	5·6	·4	
,, 19	6438	,,	,,	,,	1−2, g+3	5·3	5·6	·3	
,, 21	6440	,,	2	,,	1−2, g+3	5·3	5·6	·3	
Dec. 9	6458	,,	1	Or.	g+2·5	5·3	6·2	− ·9	
,, 11	6460	...	..	Co.	3+1	6·3	6·2	+ ·1	
,, 14	6463	B.	1	Or.	=g	5·6	6·3	− ·7	
,, 15	6464	,,	,,	Ma.	2−1·5, 3+1·5	6·2	6·3	·1	
,, 24	6473	...	...	Co.	3+1	6·3	6·7	·4	
1904.									
Jan. 3	6483	...	...	,,	3−4	6·8	7·1	·3	
,, 10	6490	...	...	,,	...	*7·3*	7·4	·1	*

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Jan. 10	6490	B.	2	Ma.	...	...	7·4	...	Invisible < 6·9.
,, 13	6493	T.28	1	,,	6+2·5	7·3	7·6	·3	
,, 15	6495	,,	,,	,,	6+1, 7+3	7·6	7·7	·1	
,, 15	6495	B.	,,	Or.	2−1	6·2	7·7	1·5	About.*
Apr. 6	6577	T.	...	Co.	51−6	11·1	11·9	·8	
May 3	6604	T.28	1	Ma.	...	...	12·9	...	Invisible.
,, 18	6619	T.	...	Co.	...	...	13·2	...	,,
June 3	6635	,,	...	,,	...	...	13·4	...	,,
July 3	6665	T.28	...	Ma.	...	...	13·4	...	,, < 10·1.
,, 5	6667	T	...	Co.	...	...	13·3	...	,,
Aug. 2	6695	,,	...	,,	...	*10·8*	12·2	1·4	Doubtful.
,, 14	6707	,,	...	,,	...	*10·0*	11·3	1·3	
,, 18	6711	T.	...	Wm	...	...	11·0	...	Invisible.
,, 28	6721	T.	...	Co.	...	*9·8*	10·1	− ·3	
,, 28	6721	T.40	1	Br.	=36	10·2	10·1	+ ·1	
,, 29	6722	,,	,,	,,	=36	10·2	10·0	·2	
,, 30	6723	B.	...	Ma.	...	...	9·9	...	Invisible.
Sept. 3	6727	T.28	1	Ma.	27−1, 34+1	10·0	9·6	·4	
,, 10	6734	T.	...	Co.	...	*9·5*	9·0	·5	
,, 15	6739	T.25	1	Br.	20−1, 29+2	9·5	8·6	·9	
,, 16	6740	T.28	2	Ma.	20−2, 27+2	9·6	8·5	1·1	
,, 17	6741	,,	1	,,	20−1	9·5	8·4	1·1	
,, 18	6742	T.75	,,	Br.	=18	9·3	8·4	+ ·9	
,, 20	6744	T.40	2	,,	16+1, 13−2	8·9	8·2	+ ·7	
,, 25	6749	,,	,,	,,	13−1·5, 16+1·5	8·8	7·9	·9	
,, 27	6751	T.28	,,	Ma.	20−1	9·5	7·8	1·7	
,, 29	6753	,,	1	,,	20−1	9·5	7·7	1·8	
Oct. 1	6755	T.25	,,	Br.	13−2, 14+2	8·9	7·6	1·3	
,, 3	6757	T.28	2	Ma.	20+1	9·3	7·4	1·9	
,, 3	6757	T.	...	Co.	9−4·5, 18+4·5	8·8	7·4	1·4	
,, 7	6761	T.28	1	Ma.	20−1	9·5	7·2	1·3	
,, 8	6762	T.25	,,	Br.	=12	8·8	7·2	1·6	
,, 11	6765	T.28	,,	Ma.	20+1·5	9·2	7·0	2·2	
,, 11	6765	T.	...	Wm	=20	9·4	7·0	2·4	
,, 12	6766	T.28	1	Ma.	20+1·5	9·2	7·0	2·2	
,, 12	6766	T.40	,,	Br.	9−2, 12+2	8·6	7·0	1·6	
,, 13	6767	T.28	,,	Ma.	13−3·5, 20+3·5	9·0	6·9	2·1	
,, 26	6780	B.	,,	,,	...	...	6·8	...	Invisible.
,, 29	6783	T.28	,,	,,	7−2, 13+4,	8·3	6·2	2·1	
,, 29	6783	T.	...	Co.	9+2	8·2	6·2	2·0	
Nov. 3	6788	T.28	1	Ma.	6+2, 7+2	7·8	5·9	1·9	
,, 6	6791	T.25	2	Br.	3−2	6·6	5·9	·7	
,, 6	6791	B.	1	My.	=3	6·4	5·9	·5	
,, 9	6794	,,	,,	,,	2−2, 3+1	6·3	5·8	·5	
,, 12	6797	,,	,,	,,	2−1, 3+2	6·2	5·7	·5	
,, 12	6797	T.25	,,	Br.	2+1	6·0	5·7	·3	
,, 12	6797	B.	,,	Ma.	2−1, 3+3	6·1	5·7	·4	
,, 12	6797	T.	...	Wm	=2	6·1	5·7	·4	

(7120) χ CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Nov. 12	6797	T.	...	Co.	2+1	6·0	5·7	·3	
,, 14	6799	B.	1	Ma.	=2	6·1	5·6	·5	Warm hue.
,, 14	6799	,,	,,	Br.	1−8, 2+2	5·9	5·6	+ ·3	
,, 14	6799	,,	,,	My.	1−2·5, 2+7·5	5·3	5·6	− ·3	
,, 15	6800	,,	,,	Br.	g−2, 2+2	5·8	5·6	+ ·2	
,, 16	6801	,,	,,	My.	1−6, 2+4	5·7	5·6	+ ·1	
,, 18	6803	,,	2	,,	1−4, 2+6	5·5	5·5	0	
,, 20	6805	,,	,,	,,	1−2·5, 2+7·5	5·3	5·4	− ·1	
,, 22	6807	,,	1	Br.	1−2, 2+8	5·3	5·4	·1	
,, 23	6808	,,	,,	,,	1−1	5·2	5·4	·2	
,, 25	6810	,,	2	My.	1+1	5·0	5·4	·4	
,, 26	6811	F.	...	Wm	1+4	4·7	5·3	·6	
,, 26	6811	B.	1	Br.	R−1·5, 1+1·5	4·9	5·3	·4	
,, 27	6812	,,	,,	My.	1+2	4·9	5·3	·4	
,, 28	6813	,,	,,	Br.	R−1, 1+3	4·8	5·3	·5	
,, 29	6814	,,	,,	Ma.	c−6, 1+3	4·7	5·3	·6	Warm orange.
,, 29	6814	,,	,,	My	c−6, 1+4	4·7	5·3	·6	
Dec. 1	6816	,,	,,	,,	c−4, 1+6	4·5	5·3	·8	
,, 1	6816	,,	2	Br.	c−6, 1+3	4·7	5·3	·6	
,, 2	6817	,,	,,	,,	c−6, R+2	4·6	5·3	·7	
,, 3	6818	,,	,,	Ma.	c−2	4·2	5·3	1·1	
,, 4	6819	,,	,,	My.	c−1	4·1	5·3	1·2	
,, 5	6820	T.	...	Co.	1+3	4·8	5·3	·5	
,, 5	6820	N.E.	1	Br.	e−1, d+1	4·5	5·3	− ·8	
,, 6	6821	B.	1	My.	c−1	4·1	5·3	− 1·2	
,, 7	6822	,,	,,	Ma.	c−2·5, 1+5	4·4	5·3	·9	Reddish orange.
,, 7	6822	F.	...	Wm	c−3	4·3	5·3	1·0	
,, 8	6823	B.	1	My.	=c	4·0	5·3	1·3	
,, 8	6823	,,	2	Br.	e−1, d+1	4·5	5·3	·8	
,, 9	6824	B. & N.E.	1	,,	c−2, R+4, T−3, e+3	4·3	5·3	1·0	
,, 10	6825	B.	2	Ma.	c−2	4·2	5·3	1·1	
,, 11	6826	,,	,,	My.	c+1	3·9	5·3	1·4	
,, 12	6827	F.	...	Wm	c−3, 1+8	4·3	5·3	1·0	
,, 13	6828	B.	1	Ma.	c−2, 1+7	4·3	5·4	1·1	
,, 13	6828	B. & N.E.	,,	Br.	c−2, R+4, T−3, e+3	4·3	5·4	1·1	
,, 13	6828	B.	,,	My.	c−1	4·1	5·4	1·3	
,, 14	6829	,,	,,	Ma.	c−1·5, 1+7	4·3	5·4	1·1	
,, 14	6829	...	...	Co.	1+4	4·7	5·4	·7	
,, 16	6831	B.	2	Br.	c−2, R+4, T−3, e+3	4·3	5·4	1·1	
,, 17	6832	,,	,,	My.	c−1	4·1	5·4	1·3	
,, 18	6833	,,	1	Ma.	c−1·5, 1+7	4·3	5·4	1·1	Ruddy.
,, 19	6834	,,	2	My.	c−2·5, 1+7·5	4·3	5·4	1·1	
,, 20	6835	F.	...	Wm	c−5, 1+6	4·5	5·4	·9	
,, 22	6837	B.	2	Br.	c−3·5, R+3·5	4·4	5·5	1·1	
,, 25	6840	,,	,,	My.	c−5, 1+5	4·6	5·5	·9	
,, 27	6842	,,	1	,,	c−5, 1+5	4·6	5·5	·9	
,, 29	6844	,,	,,	,,	c−6, 1+4	4·7	5·6	·9	
,, 29	6844	T.	...	Co.	1+3	4·8	5·6	·8	
,, 30	6845	B.	1	Ma.	c−2·5	4·3	5·6	1·3	
,, 30	6845	B. & N.E.	,,	Br.	c−6, R+2	4·6	5·6	1·0	
,, 31	6846	B.	,,	My.	c−6, 1+4	4·7	5·6	− ·9	

(7609) T CEPHEI.

NOTE.

Additional stars :—

P = D.M. + 68° 1187, 9·10 m.
R = „ + 66° 1405, 5·35 „ P.D.M.
S = „ + 67° 1329, 6·80 „
T = „ + 68° 1190, 8·80 „

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Nov. 17	5341	T.28	1	Ma.	=h	8·1	7·5	+ ·6	
„ 18	5342	B.	„	„	h+1	8·0	7·4	·6	
Dec. 12	5366	„	„	Ke.	(h+1)+1·5	7·6	7·0	·6	
„ 13	5367	„	„	Ma.	d−5	7·2	7·0	+ ·2	
„ 15	5369	T.28	„	„	d−2	6·9	6·9	0	
„ 16	5370	B.	„	Ke.	(h+1)+2·5	7·5	6·9	+ ·6	
„ 19	5373	T.28	„	Ma.	=e	7·1	6·8	·3	Ruddy.
„ 20	5374	B.	„	Ke.	(h+1)+4	7·4	6·8	+ ·6	
1901.									
Jan. 8	5393	T.28	2	Ma.	d+5	6·2	6·4	− ·2	
„ 17	5402	B.	„	Ke.	d+2·5	6·4	6·2	+ ·2	Reddish.
„ 19	5404	„	„	„	d+3	6·4	6·2	·2	Red.
„ 22	5407	„	„	„	d+3·5	6·3	6·1	·2	
„ 25	5410	„	„	„	d+4·5	6·2	6·0	·2	Red.
„ 31	5416	„	„	„	e−1·5, d+5·5	6·2	6·0	·2	
Feb. 5	5421	„	2	Ma.	d+3	6·4	5·9	·5	
„ 12	5428	T.28	„	„	d+5	6·2	6·0	·2	
„ 12	5428	B.	1	Ke.	e−3, d+2	6·4	6·0	·4	Reddish.
„ 15	5431	„	2	Ma.	d+4	6·3	6·0	·3	
„ 15	5431	T.	„	Or.	d+3	6·4	6·0	·4	
„ 21	5437	B.	1	Ke.	=d	6·7	6·1	·6	
Mar. 8	5452	T.28	1	Ma.	d−5, h+10	7·2	6·4	·8	
„ 10	5454	B.	3	Or.	d−1	6·8	6·4	·4	
„ 16	5460	T.28	„	Ma.	d−7, h+7	7·4	6·6	·8	
„ 18	5462	B.	2	„	d−10	7·7	6·6	1·1	
„ 22	5466	T.28	1	„	d−6	7·3	6·7	·6	Slightly ruddy.
„ 25	5469	T.30	„	Ch.	f−2, h+3	7·9	6·8	1·1	
„ 27	5471	„	2	„	f−2, h+3	7·9	6·8	1·1	
„ 28	5472	„	„	„	h+4	7·7	6·9	·8	
„ 28	5472	T.28	„	Ma.	d−7, h+7	7·4	6·9	·5	
„ 31	5475	T.30	„	Ch.	h+3	7·8	7·0	·8	
Apr. 1	5476	„	„	„	h+4	7·7	7·0	+ ·7	
„ 1	5476	T.	1	Or.	d−1, e+3	6·8	7·0	− ·2	Red.
„ 4	5479	T.30	2	Ch.	h+3	7·8	7·1	+ ·7	
„ 9	5484	„	1	„	f−3, 2−1, h+2	8·1	7·2	·9	
„ 10	5485	„	„	„	f−3, g+2, h+2	8·0	7·3	·7	
„ 10	5485	T.	„	Or.	f+2, e−3	7·5	7·3	·2	
„ 12	5487	T.30	„	Ch.	=h	8·1	7·3	·8	
„ 15	5490	T.	„	Or.	f+1	7·6	7·4	·2	
„ 17	5492	„	2	„	f−2, g+3	7·9	7·5	·4	
„ 18	5493	„	1	„	f−2, g+3	7·9	7·5	·4	

(7609) T CEPHEI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Apr. 18	5493	T.60	1	Ch.	g−2, h−4	8·5	7·5	1·0	
,, 19	5494	T.	,,	Or.	=f	7·7	7·5	·2	
,, 20	5495	,,	,,	,,	f+1, g+3	7·7	7·6	·1	
,, 20	5495	T.30	,,	Ch.	h−2	8·3	7·6	·7	
,, 21	5496	,,	,,	,,	h−3, g+2	8·2	7·6	·6	
,, 22	5497	,,	2	,,	h−3, g−2	8·4	7·6	·8	
,, 25	5500	,,	,,	,,	h−3, g−3	8·2	7·7	·5	
,, 30	5505	,,	,,	,,	g−4	8·6	7·9	+ ·7	
May 6	5511	,,	1	,,	h−5	8·6	8·0	·6	
,, 8	5513	,,	,,	,,	=k, m+8	8·8	8·1	·7	
,, 12	5517	,,	,,	,,	k−2	9·0	8·2	·8	
,, 13	5518	,,	,,	,,	h−8, k−2	9·0	8·2	·8	
,, 14	5519	,,	,,	,,	k−3, m+3	9·2	8·3	·9	
,, 16	5521	,,	,,	,,	k−3, m+5	9·1	8·3	·8	
,, 19	5524	,,	,,	,,	k−3	9·1	8·4	·7	
,, 20	5525	,,	,,	,,	k−4, m+6	9·1	8·5	·6	
,, 31	5536	,,	2	,,	k−4, m+6	9·1	8·8	·3	
June 5	5541	,,	1	,,	l+3, m+4	9·1	8·9	·2	
,, 16	5552	,,	,,	,,	k−7, m+3	9·4	9·2	·2	
,, 23	5559	,,	,,	,,	m−3, o+1	10·2	9·4	+ ·8	
,, 26	5562	,,	2	,,	m+3	9·4	9·4	0	Very red.
,, 27	5563	,,	,,	,,	m+3	9·4	9·5	− ·1	
July 7	5573	T.60	,,	,,	m−5, =n	10·1	9·7	+ ·4	
,, 8	5574	,,	1	,,	m−3, n+2	9·9	9·7	·2	
,, 15	5581	T.30	,,	,,	m−4, n+1	10·0	9·8	·2	
,, 18	5584	,,	,,	,,	=n	10·1	9·8	·3	
,, 22	5588	,,	,,	,,	n−2, o+2	10·3	9·9	·4	
,, 28	5594	T.60	2	,,	n−2	10·3	9·9	·4	
Aug. 6	5603	,,	1	,,	n−1	10·2	9·9	+ ·3	
,, 13	5610	,,	,,	,,	=m	9·7	9·9	− ·2	
,, 18	5615	T.30	,,	,,	=m, n+4	9·7	9·9	·2	
Sept. 4	5632	,,	2	,,	k−6, m+6, n+8	9·2	9·6	− ·4	Very red.
,, 15	5643	,,	1	,,	h−5, k+3, m+8	8·7	9·3	+ ·4	,, ,,
Oct. 7	5665	,,	,,	,,	=g, =h, k+6	8·2	8·7	− ·5	Fine red.
,, 18	5676	,,	,,	,,	f−3·5, g+1·5	8·0	8·5	·5	,, ,,
Nov. 3	5692	T.28	,,	Ma.	h+4	7·7	8·1	− ·4	Ruddy.
,, 10	5699	T.20	2	LeB.	h+2, g+2	8·0	7·9	+ ·1	
,, 14	5703	,,	,,	,,	f−3, h+1	8·0	7·9	+ ·1	
,, 14	5703	T.28	,,	Ma.	d−7, h+7	7·4	7·9	− ·5	
,, 17	5706	T.20	,,	LeB.	h+1, g+1	8·1	7·8	+ ·3	
,, 21	5710	,,	,,	,,	h+2, g+2	8·0	7·8	+ ·2	
,, 28	5717	T.30	1	Ch.	f+4, g+6	7·4	7·7	− ·3	
,, 29	5718	T.20	,,	LeB.	f−3, h+4	7·9	7·6	+ ·3	
Dec. 6	5725	,,	3	,,	h+4, g+4	7·8	7·5	·3	Date doubtful.
,, 10	5729	,,	1	,,	f+5, g+3	8·0	7·4	·6	,, ,,
,, 16	5735	T.30	,,	Ch.	e−5, f−2, g+5	7·4	7·3	·1	
,, 17	5736	T.20	2	LeB.	h+2, g+3	7·9	7·3	·6	Date doubtful.
,, 26	5745	T.30	1	Ch.	d−5, e−3, f+4	7·3	7·1	·2	

(7609) T CEPHEI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Dec. 27	5746	T.20	1	LeB.	f−3, g+2	8·0	7·1	·9	
,, 30	5749	,,	3	,,	f−4, h+2	8·0	7·0	+1·0	Date doubtful.
1902.									
Jan. 1	5751	T.	,,	Co.	...	*6·9*	7·0	− ·1	
,, 4	5754	T.28	1	Ma.	=d	6·7	6·9	·2	
,, 5	5755	,,	,,	,,	=d	6·7	6·9	− ·2	Ruddy.
,, 5	5755	T.30	,,	Ch.	d−2, e+2, f+2	7·1	6·9	+ ·2	Yellowish white.
,, 9	5759	T.20	3	LeB.	d+2	6·5	6·8	− ·3	
,, 13	5763	,,	2	,,	d+1	6·6	6·8	− ·2	
,, 14	5764	,,	3	,,	d+2	6·5	6·7	·2	
,, 19	5769	,,	,,	,,	d+5	6·2	6·6	·4	
,, 21	5771	T.	...	Co.	...	*6·0*	6·6	·6	
,, 31	5781	T.30	1	Ch.	d+5, e+8	6·3	6·4	·1	Yellow.
Feb. 9	5790	B.	,,	,,	b−2, d+8	5·8	6·2	− ·4	White.
,, 27	5808	,,	2	,,	d+8, e+10	6·0	5·9	+ ·1	
Mar. 15	5824	T.	...	Co.	...	*7·0*	6·1	·9	
Apr. 7	5847	,,	...	,,	...	*7·0*	6·6	+ ·4	
,, 18	5858	T.95	1	Ch.	d+3, e+6	6 5	6·9	− ·4	
,, 23	5863	,,	,,	,,	d+4, e+8	6·3	7·0	·7	
,, 27	5867	,,	,,	,,	d−3, e+2, f+5	7 0	7·1	·1	Very red.
May 5	5875	,,	,,	,,	d−4, f+8	7·0	7·3	− ·3	
,, 7	5877	T.	...	Co.	...	*7·5*	7·4	+ ·1	
,, 12	5882	T.95	1	Ch.	f+3, g+2	8·0	7·6	·4	
,, 25	5895	T.30	,,	,,	g+2, k+3	8·2	7·9	+ ·3	
June 7	5908	T.	...	Co.	...	*8·0*	8·3	− ·3	
,, 21	5922	,,	...	,,	...	*8·2*	8·7	− ·5	
July 1	5932	,,	...	,,	...	*9·0*	9·0	0	
,, 6	5937	T.95	1	Ch.	m+4	9·3	9·1	+ ·2	
Sept. 4	5997	T.	...	Co.	...	*10·0*	9·9	·1	
,, 21	6014	,,	...	,,	...	*10·5*	9·7	·8	
Oct. 21	6044	,,	...	,,	...	*9·8*	8·9	·9	
,, 30	6053	T.28	1	Ma.	l−1, P+2·5	9·1	8·7	·4	
Nov. 7	6061	T.	...	Co.	...	*9·0*	8·5	·5	
,, 10	6064	T.95	2	Ch.	g−4, k+2	8·6	8·4	·2	
,, 15	6069	T.	...	Co.	...	*9·3*	8·3	1·0	
,, 21	6075	,,	..	,,	...	*9·0*	8·2	·8	
,, 28	6082	,,	...	,,	...	*9·0*	8·0	1·0	
Dec. 4	6088	,,	...	,,	...	*9·0*	7·9	1·1	
,, 18	6102	T.28	2	Ma.	h−1	8·2	7·7	+ ·5	
,, 20	6104	T.	...	Co.	...	*7·5*	7·7	− ·2	
,, 21	6105	T.28	2	Ma.	f−2·5, g+2·5, =h	8·0	7·6	+ ·4	
,, 23	6107	,,	,,	,,	=h	8·1	7·6	+ ·5	
,, 31	6115	T.	...	Co.	...	*7·5*	7·5	0	
1903.									
Jan. 2	6117	,,	...	,,	...	*7·5*	7·4	+ ·1	
,, 3	6118	T.28	1	Ma.	h−2	8·3	7·4	·9	Ruddy.

(7609) T CEPHEI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Jan. 23	6138	B.	1	Ma.	...	...	7·0	...	Invisible <7·1.
,, 23	6138	T.	...	Co.	...	*7·8*	7·0	·8	
Feb. 1	6147	,,	2	,,	...	*7·3*	6·8	+ ·5	
,, 13	6159	,,	1	,,	...	*6·5*	6·6	− ·1	
,, 17	6163	T.28	,,	Ma.	d+2·	6·4	6·5	− ·1	
,, 21	6167	T.	...	Co.	...	*6·5*	6·4	+ ·1	
,, 28	6174	,,	...	,,	...	*6·3*	6·2	+ ·1	
,, 28	6174	T.28	1	Ma.	d+6	6·1	6·2	− ·1	Ruddy.
Mar. 3	6177	,,	,,	,,	d+4·5	6·2	6·2	0	
,, 5	6179	T.	...	Co.	...	*6·3*	6·1	+ ·2	
,, 16	6190	,,	...	,,	...	*6·0*	6·0	0	
,, 16	6190	B.	1	Ma.	d+4	6·3	6·0	+ ·3	Ruddy.
,, 22	6196	B.	...	Co.	...	*6·3*	5·9	+ ·4	
,, 28	6202	T.	...	,,	...	*6·0*	6·0	0	
,, 30	6204	B.	..	,,	...	*6·5*	6·0	+ ·5	
Apr. 2	6207	T.	...	,,	...	*6·5*	6·0	·5	
,, 11	6216	,,	...	,,	...	*6·3*	6·2	·1	
,, 24	6229	,,	...	,,	=d	6·7	6·5	·2	
May 15	6250	,,	...	,,	h+3	7·8	7·0	·8	
,, 24	6259	,,	...	,,	h+5	7·6	7·3	·3	
June 21	6287	,,	...	,,	...	*9·3*	8·1	1·2	
July 23	6319	,,	...	,,	...	*9·3*	9·0	+ ·3	
Aug. 25	6352	,,	...	,,	m+2	9·5	9·7	− ·2	
Sept. 2	6360	,,	...	,,	...	*9·8*	9·8	0	
,, 12	6370	,,	...	,,	m+2	9·5	9·9	− ·4	
Oct. 15	6403	,,	...	,,	m+2	9·5	9·6	− ·1	
,, 25	6413	,,	...	,,	...	*9·5*	9·4	+ ·1	
Nov. 8	6427	B.	1	Ma.	...	...	9·0	...	Invisible <8·0.
,, 14	6433	T.28	,,	,,	=l	9·2	8·9	·3	
,, 14	6433	T.	...	Co.	...	*9·3*	8·9	·4	
,, 21	6440	T.28	1	Ma.	h−7, l+3·5	8·8	8·7	·1	
Dec. 11	6460	T.	...	Co.	...	*8·8*	8·2	·6	
,, 24	6473	,,	...	,,	h−5, l+5	8·7	8·0	·7	
1904.									
Jan. 3	6483	,,	...	,,	=h	8·1	7·8	·3	
,, 10	6490	,,	...	,,	h+1	8·0	7·7	·3	
,, 14	6494	T.28	1	Ma.	h+2	7·9	7·6	+ ·3	
Feb. 6	6517	T.	...	Co.	=d	6·7	7·2	− ·5	
,, 13	6524	,,	...	,,	d+2	6·5	7·0	·5	
Mar. 10	6550	,,	...	,,	d+9	5·8	6·5	·7	
,, 16	6556	B.	2	Oa.	R−3·5	5·7	6·3	·6	
,, 21	6561	,,	1	,,	R−5	5·9	6·2	·3	
,, 21	6561	T.	...	Co.	d+9	5·8	6·2	·4	
,, 22	6562	B.	1	Oa.	R−5	5·9	6·2	− ·3	

(7609) T CEPHEI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Apr. 4	6575	B.	2	Oa.	R−8·5	6·2	6·0	+ ·2	
,, 6	6577	,,	,,	,,	=S	6·8	6·0	·8	
,, 6	6577	,,	,,	Or.	d+4	6·3	6·0	+ ·3	Fine red.
,, 6	6577	T.	...	Co.	d+7	6·0	6·0	0	
,, 8	6579	B.	1	Oa.	S+3	6·5	5·9	+ ·6	
,, 9	6580	,,	,,	,,	=S	6·8	5·9	·9	
,, 10	6581	,,	,,	Or.	c−1	6·1	5·9	·2	
,, 10	6581	,,	,,	Ma.	d+5	6·2	5·9	·3	
,, 12	6583	T.28	,,	,,	d+2·5	6·4	5·9	·5	Ruddy.
,, 15	6586	B.	,,	Or.	c−4, d+2	6·5	6·0	+ ·5	
,, 16	6587	T.	...	Co.	d+7	6·0	6·0	0	
May 2	6603	,,	...	,,	=d	6·7	6·2	+ ·5	
,, 2	6603	B.	1	Oa.	S−2	7·0	6·2	·8	
,, 3	6604	,,	,,	Ma.	=d	6·7	6·2	·5	
,, 18	6619	T.28	,,	,,	=d	6·7	6·5	+ ·2	
,, 18	6619	T.	...	Co.	d+2	6·5	6·5	0	
June 3	6635	T.	...	Co.	d−1	6·8	6·9	− ·1	
,, 3	6635	T.28	1	Ma.	=d	6·7	6·9	− ·2	Ruddy.
,, 7	6639	,,	2	,,	d−3	7·0	7·0	0	
,, 22	6654	,,	3	,,	e−3·5	7·5	7·5	0	
,, 28	6660	,,	1	,,	e−7·5	7·9	7·7	+ ·2	
July 3	6665	,,	,,	,,	d−10, h+5	7·7	7·8	− ·1	Ruddy.
,, 5	6667	T.	...	Co.	h+1	8·0	7·9	+ ·1	
,, 12	6674	,,	...	,,	h−3, k+3	8·5	8·1	+ ·4	
,, 15	6677	T.28	1	Ma.	h+2·5	7·9	8·2	− ·3	
,, 20	6682	,,	2	,,	h+2	7·9	8·3	− ·4	Ruddy.
Aug. 2	6695	,,	1	,,	h−1·5	8·3	8·2	+ ·1	
,, 2	6695	T.	...	Co.	h−7	8·8	8·2	+ ·6	
,, 8	6701	T.28	1	Ma.	h−2	8·3	8·9	− ·6	
,, 11	6704	,,	,,	,,	h−4, T+4	8·5	9·0	− ·5	
,, 14	6707	T.	...	Co.	=l	9·2	9·0	+ ·2	
,, 17	6710	T.28	1	Ma.	g−3, =k, l+2	8·7	9·1	− ·4	
,, 18	6711	,,	,,	,,	h−7, g−5, k−2	8·8	9·2	·4	
,, 20	6713	,,	,,	,,	k−3, m+5	9·1	9·2	− ·1	
,, 28	6721	,,	2	,,	m−1	9·8	9·4	+ ·4	
Sept. 3	6727	,,	1	,,	=l, m+4, P+3	9·1	9·5	− ·4	
,, 3	6727	T.	...	Co.	m+4	9·3	9·5	·2	
Oct. 3	6757	,,	...	,,	l−2, m+2	9·4	9·9	·5	
,, 3	6757	T.28	2	Ma.	m+1·5	9·5	9·9	− ·4	
,, 11	6765	,,	1	,,	m−3, n+1	10·0	9·9	+ ·1	
,, 29	6783	,,	,,	,,	m−2, m+5·5	9·7	9·8	− ·1	
,, 29	6783	T.	...	Co.	m+4	9·3	9·8	− ·5	
Nov. 3	6788	T.28	1	Ma.	m+1, n+3·5	9·8	9·7	+ ·1	
,, 12	6797	T.	...	Co.	l−1	9·3	9·5	− ·2	
,, 14	6799	T.28	1	Ma.	m+1, n+5	9·6	9·4	+ ·2	
,, 29	6814	,,	,,	,,	m+3	9·4	9·0	·4	
Dec. 5	6820	T.	...	Co.	=l	9·2	8·9	·3	
,, 7	6822	T.28	1	Ma.	=l, m+4	9·2	8·8	·4	
,, 14	6829	,,	,,	,,	g−6	8·8	8·6	+ ·2	

(7754) W CYGNI.

NOTE.

Comparison stars used:—

A = D.M. + 44° 3889	6·12 m. P.D.M.
B = „ + 43° 4002	6·70 „ „
C = „ + 45° 3584	6·56 „ „
D = F 71 Cygni = D.M. + 46° 3558	5·38 „ „
F = D.M. + 46° 3305	5·54 „ „

Data for mean curve:—Period, 132 d. $M-m$, 70 d. Variation, 5·0 m. to 6·7 m.

On plotting the observations it is found that they by no means support, or agree with this curve. In many cases they are directly opposed to it, showing the star bright when it should be faint. It has, therefore, not been considered necessary to complete the two columns next following the deduced magnitude.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1899.									
Aug. 9	4876	B.	1	Ma.	A−3, B−5, C+7·5	6·5			
1900.									
Sept. 29	5292	„	„	„	A−3, B+2, C+6	6·3			
Oct. 5	5298	T.30	2	Ch.	A+4	5·7			
„ 13	5306	„	1	„	A+4	5·7			
„ 18	5311	B.	„	Ma.	A−3, B+2, C+3	6·4			
„ 19	5312	„	2	„	A−5, B+2, C+3	6·5			
„ 21	5314	„	„	„	A−5, B−1, C+5	6·5			
Nov. 13	5337	„	„	„	A−3, B+3	6·4			
„ 13	5337	T.15	1	Ki.	A+4, B+7, C+8·5, D−6·5	5·9			
„ 18	5342	B.	„	Ma.	=A	6·1			
„ 25	5349	„	„	Ch.	=F	5·5			
„ 27	5351	„	2	„	D−2	5·6			
Dec. 7	5361	„	„	„	=D	5·4			
„ 10	5364	„	1	„	D−1, F+1	5·5			
„ 13	5367	„	„	Ma.	A+1·5	6·0			
„ 15	5369	„	„	Ch.	D−2	5·6			
„ 17	5371	„	„	„	D−1, F+1	5·5			
„ 25	5379	„	„	„	D−1	5·5			
„ 26	5380	„	2	„	D−1	5·5			
„ 28	5382	„	1	„	D+1	5·3			
1901.									
Jan. 9	5394	„	„	„	D−2	5·6			
„ 14	5399	„	„	„	D−2	5·6			
Apr. 21	5496	„	„	„	A−4, B−2	6·7			
May 13	5518	„	„	„	A−1, B+4	6·3			

(7754) W CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
May 19	5524	B.	1	Ch.	A−6, B−2	6·8			
,, 20	5525	,,	,,	,,	A−6, =B	6·7			
,, 23	5528	,,	,,	,,	B−2, C+3	6·6			
,, 24	5529	,,	,,	,,	B−2, C+3	6·6			
June 10	5546	T.30	,,	,,	A−3, B+2, C+4	6·4			
,, 16	5552	,,	,,	,,	A+4, B+7	5·9			
,, 23	5559	,,	,,	,,	D−6, F−3, A+4	5·8			
,, 27	5563	,,	2	,,	A+6	5·5			
July 7	5573	B.	,,	,,	A+3	5·8			
,, 8	5574	,,	1	,,	A+4	5·7			
,, 10	5576	,,	,,	,,	A+3	5·8			
,, 16	5582	,,	,,	,,	=F, A+4	5·6			
,, 18	5584	,,	,,	,,	A+4	5·7			
,, 22	5588	,,	,,	,,	=A	6·1			
,, 27	5593	,,	2	,,	F−3, A+4	5·8			
Aug. 4	5601	,,	1	,,	=F	5·5			
,, 7	5604	,,	,,	,,	=F	5·5			
,, 13	5610	,,	,,	,,	F−4, A+3	5·9			
,, 18	5615	,,	,,	,,	=F, A+6	5·5			
,, 19	5616	,,	2	Ma.	F−3, A+3	5·8			
,, 20	5617	,,	1	Pe.	A+3, B+6	6·0			
,, 21	5618	,,	,,	,,	A+4, B+7	5·9			
,, 21	5618	,,	,,	Ch.	=F, A+6	5·5			
,, 22	5619	,,	3	Ma.	=F, A+1·5	5·8			
,, 22	5619	,,	2	Pe.	A+6	5·5			
,, 27	5624	,,	,,	,,	A+7	5·4			
,, 28	5625	,,	,,	,,	A+6	5·5			
,, 29	5626	,,	,,	,,	A+7	5·4			
,, 30	5627	,,	,,	,,	A+8	5·3			
Sept. 2	5630	,,	,,	,,	A+6	5·5			
,, 4	5632	,,	,,	,,	A+5	5·6			
,, 5	5633	,,	,,	,,	A+6	5·5			
,, 7	5635	,,	1	,,	A+6	5·5			
,, 9	5637	,,	,,	,,	A+4	5·7			
,, 9	5637	,,	,,	Ch.	F−2, A+5	5·7			
,, 13	5641	,,	,,	Pe.	A+3	5·8			
,, 14	5642	,,	,,	,,	A+4	5·7			
,, 15	5643	,,	,,	,,	A−1, B+5	6·2			
,, 15	5643	,,	,,	Ch.	=F, A+5	5·6			
,, 16	5644	,,	,,	Pe.	A−1	6·2			
,, 17	5645	,,	,,	,,	A−5, B−1	6·7			
,, 18	5646	,,	,,	,,	A−5, B−1	6·7			
,, 19	5647	,,	,,	,,	A−5	6·6			
,, 22	5650	,,	2	,,	B−1	6·8			
Oct. 3	5661	,,	1	,,	B−3, C+1	6·7			
,, 4	5662	,,	,,	Ma.	A−3, B+3	6·4			
,, 5	5663	,,	,,	Ch.	F−4, A+6	5·7			
,, 5	5663	,,	,,	Pe.	A−2, B+3	6·4			
,, 6	5664	,,	,,	,,	A−3	6·4			
,, 18	5676	,,	,,	Ch.	F−4, A+1·5	6·0			
,, 22	5680	,,	2	Ma.	A−4, B+2, C+6	6·3			

(7754) W CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Nov. 3	5692	B.	1	Ma.	=C	6·6			
,, 28	5717	,,	,,	Ch.	F−3, A+4	5·8			
1902.									
Jan. 5	5755	,,	,,	Ma.	B−8, C−5	7·3			
Apr. 6	5846	F.	2	Ch.	A−4, C+2	6·4			
,, 18	5858	,,	3	,,	F−9, C+4	6·3			
,, 23	5863	,,	1	,,	F−3, =A	6·0			
,, 27	5867	,,	2	,,	A−4, =B, C+3	6·5			
,, 28	5868	,,	1	,,	F−3, =A, B+5	6·1			
May 5	5875	,,	,,	,,	F−3, =A	6·0			
,, 8	5878	B.	3	,,	=B	6·7			
,, 25	5895	,,	1	,,	A−3, C+4	6·3			
,, 27	5897	,,	,,	,,	F−4, A+3	5·9			
June 26	5927	,,	,,	,,	F−3, A+2, B+5	6·0			
,, 29	5930	,,	2	,,	A−2, B+3	6·4			
July 2	5933	,,	1	,,	F−4, A+3	5·9			
,, 6	5937	,,	,,	Ma.	A−3, =B	6·6			
Oct. 8	6031	,,	2	Ch.	A−4, C+1	6·5			
,, 10	6033	,,	1	,,	=C	6·6			
,, 14	6037	F.	,,	,,	A−9, C−1	6·8			
,, 21	6044	,,	,,	,,	C−4	7·0	...	...	V. faint.
,, 27	6050	,,	3	,,	C−3	6·9			
,, 29	6052	,,	2	,,	C−2	6·8			
Nov. 1	6055	,,	1	,,	C−3	6·9			
,, 7	6061	,,	3	,,	C+2	6·4			
,, 10	6064	,,	1	,,	C−2, =B	6·7			
,, 12	6066	,,	,,	,,	B+3, C+3	6·6			
,, 18	6072	B.	,,	Ma.	A−3, B+3	6·4			
,, 28	6082	F.	,,	Ch.	=C, B+2	6·5			
Dec. 2	6086	B.	,,	,,	F−4, A+4	5·8			
,, 23	6107	,,	,,	Ma.	A−3, B+3	6·4			
,, 24	6108	,,	,,	,,	=A	6·1			
1903.									
Jan. 3	6118	,,	,,	,,	A−3, B+3	6·4			
,, 23	6138	,,	,,	,,	A−4, B+2	6·5			
July 2	6298	,,	2	Pe.	A−2, B+1	6·5			
,, 19	6315	,,	,,	,,	=A	6·1			
,, 26	6322	,,	,,	,,	A+1	6·0			
Aug. 10	6337	,,	,,	,,	A+3	5·8			
,, 11	6338	,,	,,	,,	A+3	5·8			
,, 13	6340	,,	1	,,	A+5	5·6			
,, 21	6348	,,	,,	Ma.	A+1·5, B+1·5	6·3			
Nov. 18	6437	,,	,,	,,	B−1	6·8			

(7754) W CYGNI—*continued.*

Date.	Julian Date.	Inst.	Class	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
May 7	6608	B.	1	Ch.	A+2, B+5	6·1			
,, 8	6609	,,	,,	,,	A+1, B+3	6·2			
,, 17	6618	,,	,,	,,	A−2, B+3, C+2	6·4			
Sept. 6	6730	,,	,,	,,	=A, B+4, C+4	6·2			
Oct. 11	6765	,,	,,	Ma.	B−1, C+2	6·6			
Nov. 14	6799	,,	,,	,	=A	6·1			
,, 29	6814	,,	,,	,,	A−3, B+3	6·4			
Dec. 7	6822	,,	,,	,,	A−3, B+3	6·4			

(8290) R PEGASI.

NOTE.

Data for mean curve:—Period, 378 d. $M-m$, 172 d. Variation, 7·4 m. to 13·2 m.

Date.	Julian Date.	Inst.	Class	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Aug. 19	5251	B.	1	Ke.	f−2·5, 3+1·5	8·1	7·6	+ ·5	
,, 22	5254	,,	,,	,,	f−2·5, 3+1·5	8·1	7·6	·5	
Sept. 2	5265	,,	,,	,,	...	...	7·6	...	Just seen < 8·4.
,, 12	5275	,,	,,	,,	...	..	7·8	...	Invisible.
Oct. 16	5309	T.33	,,	Or.	...	...	9·2	...	,, <11·3.
,, 21	5314	,,	,,	,,	...	...	9·4	...	Just seen < 11·0.
1901.									
Aug. 6	5603	B.	,,	Ke.	...	...	7·4	...	Invisible.
,, 8	5605	T.30	,,	Ch.	3+2, 4+4	8·3	7·4	·9	
,, 10	5607	B.	,,	Ke.	3−2·5, =4	8·7	7·4	1·3	
,, 12	5609	,,	,,	,,	3−2·5, 4+1	8·7	7·4	1·3	
,, 13	5610	T.30	,,	Ch.	=3, 4+2	8·5	7·4	1·1	
,, 14	5611	B.	2	Ke.	...	...	7·4	...	Faint.
,, 15	5612	T.28	1	Ma.	=3	8·5	7·4	1·1	
,, 17	5614	,,	,,	,,	3−1, 4−2·5	8·8	7·5	1·3	
,, 18	5615	T.30	,,	Ch.	=3, 4+3	8·4	7·5	·9	
,, 19	5616	B.	2	Ke.	3−2, 4+2	8·6	7·5	1·1	
,, 20	5617	T.28	1	Ma.	4+1	8·6	7·5	1·1	
,, 21	5618	B.	2	Ke.	=4	8·7	7·5	1·2	
,, 23	5620	T.28	3	Ma.	3+1	8·4	7·5	·9	

(8290) R PEGASI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Sept. 3	5631	T. 28	2	Ma.	=5	9·3	7·7	1·6	
,, 9	5637	T. 30	1	Ch.	4−3, 3−6, 5+2, 9+4	9·2	7·8	1·4	Very ruddy.
,, 15	5643	,,	,,	,,	3−5, =6, 9+6	9·3	8·0	1·3	,, ,,
,, 16	5644	T.	,,	Pe.	4−4, 13+7	9·6	8 0	1·6	
,, 18	5646	,,	,,	,,	9+4	9·7	8·1	1·6	
Oct. 3	5661	T. 30	2	Ch.	5−5, =8, 9+1	9·9	8 5	1·4	Very ruddy.
,, 4	5662	T. 28	1	Ma.	=9	10·1	8·5	1·6	
,, 7	5665	T. 30	,,	Ch.	=9, 12+3, 13+4	10·1	8·6	1·5	Very ruddy.
,, 16	5674	T. 28	,,	Ma.	9−2·5, 13+5·5	10·4	8·9	1·5	
,, 18	5676	,,	,,	,,	=9	10·1	9·0	1·1	
,, 18	5676	T. 30	,,	Ch.	9−3, 13+5	10·4	9·0	1·4	Dull red.
Nov. 3	5692	T. 28	,,	Ma.	=13	10·9	9·6	1·3	
,, 14	5703	,,	2	,,	13−1	11·0	10·0	1·0	Difficult.
,, 15	5704	T. 60	,,	Ch.	21−4, 22−5, 30+4, 31+2·5	12·4	10·0	2·4	
,, 28	5717	,,	3	,,	=33	12·8	10·6	2·2	
Dec. 26	5745	T. 160	1	,,	...	...	11·7	...	<11·8.
,, 27	5746	,,	,,	,,	22−5, 25−2, 26−1	12·5	11·7	·8	
1902.									
Jan. 5	5755	T. 95	,,	,,	21−3, 25+3	12·1	12·0	+ ·1	
,, 5	5755	T. 28	,,	Ma.	...	...	12·0	...	Invisible.
Aug. 1	5963	,,	2	,,	2−2	7·5	7·6	− ·1	
,, 12	5974	,,	1	,,	=2	7·3	7·4	− ·1	
Oct. 21	6044	T. 95	,,	Ch.	5−2, =8	9·7	8·8	+ ·9	
,, 30	6053	T. 28	2	Ma.	=8	9·8	9·2	·6	
Nov. 2	6056	T. 95	1	Ch.	5−2, 9+5	9·6	9·3	+ ·3	
Dec. 18	6102	T. 28	2	Ma.	...	...	11·1	...	Invisible.
,, 21	6105	,,	1	,,	13−2	11·1	11·2	− ·1	
,, 23	6107	,,	2	,,	...	...	11·2	...	Invisible<10·1.
1903.									
Jan. 3	6118	,,	1	,,	..	...	11·7	...	,, <10·9.
Sept. 12	6370	T.	...	Co.	6+2, 7+2	9·4	7 6	+1·8	
,, 18	6376	,,	...	,,	4−3, 6+3	9·0	7·7	+1·3	
Oct. 15	6403	,,	...	,,	9−4, 13+4	10·5	8·3	2·2	
Nov. 15	6434	T. 28	1	Ma.	=13	10·9	9·4	1·5	
,, 16	6435	,,	,,	,,	9−2·5, 13+5·5	10·4	9·4	1·0	
,, 21	6440	,,	,,	,,	=13	10·9	9·6	+1·3	
1904.									
Jan. 15	6495	,,	,,	,,	...	...	11·8	..	Invisible<10·9.
Aug. 2	6695	T.	...	Co.	2−7, 4+7	8·0	8·1	− ·1	
,, 12	6705	,,	...	Wm	...	8·2	7·8	+ ·4	*
,, 14	6707	,,	...	Co.	2+3	7·0	7·7	− ·7	

(8290) R PEGASI—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1904.									
Aug. 18	6711	T.28	1	Ma.	2−3, 4+11	7·6	7·6	0	Bright ruddy.
,, 28	6721	T.	2	Co.	2−7, 4+7	8·0	7·5	+ ·5	
Sept. 3	6727	B.	1	Or.	...	*8·0*	7·4	·6	Doubtful obs.
,, 4	6728	T.	...	Wm	...	*8·3*	7·4	·9	*
,, 16	6740	T.28	1	Ma.	2−7, 4+7	8·0	7·5	·5	
,, 17	6741	,,	,,	,,	2−7, 4+7	8·0	7·5	·5	
,, 29	6753	T.	...	Wm	...	*8·5*	7·7	·8	*
Oct. 3	6757	T.28	1	Ma.	3+2, 4+4	8·3	7·8	·5	
,, 3	6757	T.	...	Co.	3+1	8·4	7·8	·6	
,, 7	6761	,,	...	Wm	...	*8·4*	7·9	·5	*
,, 8	6762	T.28	1	Ma.	3+1, =4	8·5	7·9	·6	
,, 11	6765	,,	,,	,,	2−8. =3, 4+2	8·4	8·0	·4	
,, 13	6767	,,	3	,,	=3, =4	8·6	8·0	·6	
,, 29	6783	,,	1	,,	4−2·5	9·0	8·5	·5	
,, 29	6783	T.	...	Co.	4−7, 9+7	9·4	8·5	·9	
Nov. 3	6788	T.28	2	Ma.	3−3·5, 5−2·5 8+2·5	9·3	8·7	+ ·6	
,, 12	6797	T.	...	Co.	3−1	8·6	9·0	− ·4	
,, 12	6797	,,	...	Wm	...	*9·1*	9·0	+ ·1	*
,, 26	6811	,,	...	,,	9+3	9·8	9·5	·3	
Dec. 5	6820	,,	...	Co.	=9	10·1	9·8	·3	
,, 7	6822	,,	...	Wm	9+1	10·0	9·9	+ ·1	
,, 7	6822	T.28	1	Ma.	9+3	9·8	9·9	− ·1	
,, 10	6825	,,	2	,,	9+2	9·9	10·0	− ·1	
,, 30	6845	,,	1	,,	13+1	10·8	10·8	0	

(8600) R CASSIOPEIÆ.

NOTE.

Star N = D.M. + 50° 4199, 8·70 m. D.M.
,, P = ,, + 49° 4314, 7·37 ,, P.D.M.
,, R = ,, + 50° 4210, 8·90 ,, D.M.

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1900.									
Aug. 23	5255	T.28	1	Ma	=1	8·2	6·0	+2·2	Ruddy.
,, 25	5257	,,	,,	,,	1+1	8·1	6·0	2·1	,,
,, 26	5258	B.	,,	,,	...	...	6·0	...	Invisible.
Sept. 29	5292	T.28	,,	,,	n+5	8·9	6·8	2·1	
1901.									
July 28	5594	T.90	2	Ch.	=r	11·4	9·2	2·2	

(8600) R CASSIOPEIÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1901.									
Aug. 6	5603	T.60	1	Ch.	r+2	11·2	8·7	2·5	
,, 21	5618	,,	,,	,,	o−6, r+6	10·6	7·7	2·9	Very red.
Sept. 4	5632	B.	,,	Ke.	...	...	6·7	...	Invisible.
,, 5	5633	T.30	2	Ch.	k−4, l+2	7·9	6·6	1·3	Very red.
,, 6	5634	B.	1	Ke.	...	*8·0*	6·6	1·4	
,, 8	5636	,,	,,	,,	...	*8·0*	6·5	1·5	
,, 9	5637	T.30	,,	Ch.	h−4, =k	7·5	6·4	1·1	Very red.
,, 14	5642	B.	,,	Ke.	P−3·5	7·7	6·2	1·5	
,, 15	5643	,,	,,	,,	=P	7·4	6·2	1·2	
,, 15	5643	,,	,,	Pe.	h−3, k+1	7·4	6·2	1·2	
,, 16	5644	,,	,,	,,	=h	7·2	6·1	1·1	
,, 16	5644	,,	,,	Ke.	=P	7·4	6·1	1·3	
,, 17	5645	,,	,,	Pe.	k+1	7·4	6·1	1·3	
,, 18	5646	,,	,,	,,	h−1	7·3	6·1	1·2	
,, 18	5646	T.30	,,	Ch.	=g, h+4	6·7	6·1	·6	Fine orange.
,, 19	5647	B.	,,	Pe.	k+3	7·2	6·0	1·2	
,, 20	5648	,,	,,	Ke.	f−6, P+5	6·9	6·0	·9	
,, 23	5651	,,	2	,,	f−5·5, P+5·5	6·8	5·9	·9	
Oct. 2	5660	,,	,,	,,	f−5·5, P+5·5	6·8	5·8	1·0	
,, 4	5662	,,	,,	,,	f−6, P+5	6·9	5·7	1·2	
,, 5	5663	F.	,,	Ch.	g+2	6·5	5·7	·8	Light orange.
,, 5	5663	B.	,,	Pe.	f−5, h+3	6·8	5·7	1·1	
,, 6	5664	,,	1	Ke.	f−5·5, P+5·5	6·8	5·7	1·1	
,, 7	5665	F.	,,	Ch.	=g, h+4, k+3	6·9	5·7	1·2	
,, 9	5667	B.	,,	Ke.	f−5, P+6	6·8	5·7	1·1	
,, 10	5668	,,	,,	,,	f−7, P+4	7·0	5·7	1·3	
,, 18	5676	,,	,,	,,	P−1·5	7·5	5·8	1·7	
,, 19	5677	,,	,,	,,	P−1·5	7·5	5·8	1·7	
,, 19	5677	T.30	,,	Ch.	g−3, h+1·5	7·0	5·8	1·2	
,, 21	5679	B.	2	Ke.	P−1·5	7·5	5·8	1·7	
,, 31	5689	,,	,,	,,	P−3	7·7	6·0	1·7	
,, 31	5689	T.30	,,	Ch.	g−2, h+2	6·9	6·0	·9	
Nov. 5	5694	B.	1	Ke.	=P	7·4	6·0	1·4	
,, 10	5699	T.20	2	LeB.	h−4	7·6	6·1	1·5	
,, 14	5703	,,	,,	,,	h−3	7·5	6·2	1·3	
,, 14	5703	B.	1	Ke.	P−3·5	7·7	6·2	1·5	
,, 16	5705	,,	,,	,,	P−4	7·8	6·2	1·6	
,, 17	5706	T.20	2	LeB.	h−2	7·4	6·2	1·2	
,, 21	5710	,,	,,	,,	h−3	7·5	6·3	1·2	
,, 30	5719	B.	1	Ke.	P−5·5	7·9	6·6	1·3	
Dec. 6	5725	,,	,,	,,	P−5	7·9	6·7	1·2	
,, 10	5729	T.20	,,	LeB.	h−5, k−3, l+3	7·8	6·8	1·0	
,, 17	5736	,,	2	,,	m+3	8·5	7·0	+1·5	
,, 26	5745	B.	1	Ke.	...	...	7·2	...	Invisible.
,, 27	5746	T.20	,,	LeB.	m−4, n+2	9·2	7·2	+2·0	
,, 30	5749	,,	3	,,	m−5, n+2	9·3	7·4	1·9	
1902.									
Jan. 4	5754	,,	2	,,	n+3	9·1	7·5	1·6	Doubtful obs.
,, 4	5754	T.28	1	Ma.	n+2	9·2	7·5	1·7	
,, 5	5755	T.20	,,	LeB.	n+2	9·2	7·6	1·6	
,, 6	5756	T.95	,,	Ch.	m+6, =l	8·2	7·6	·6	Very red.*

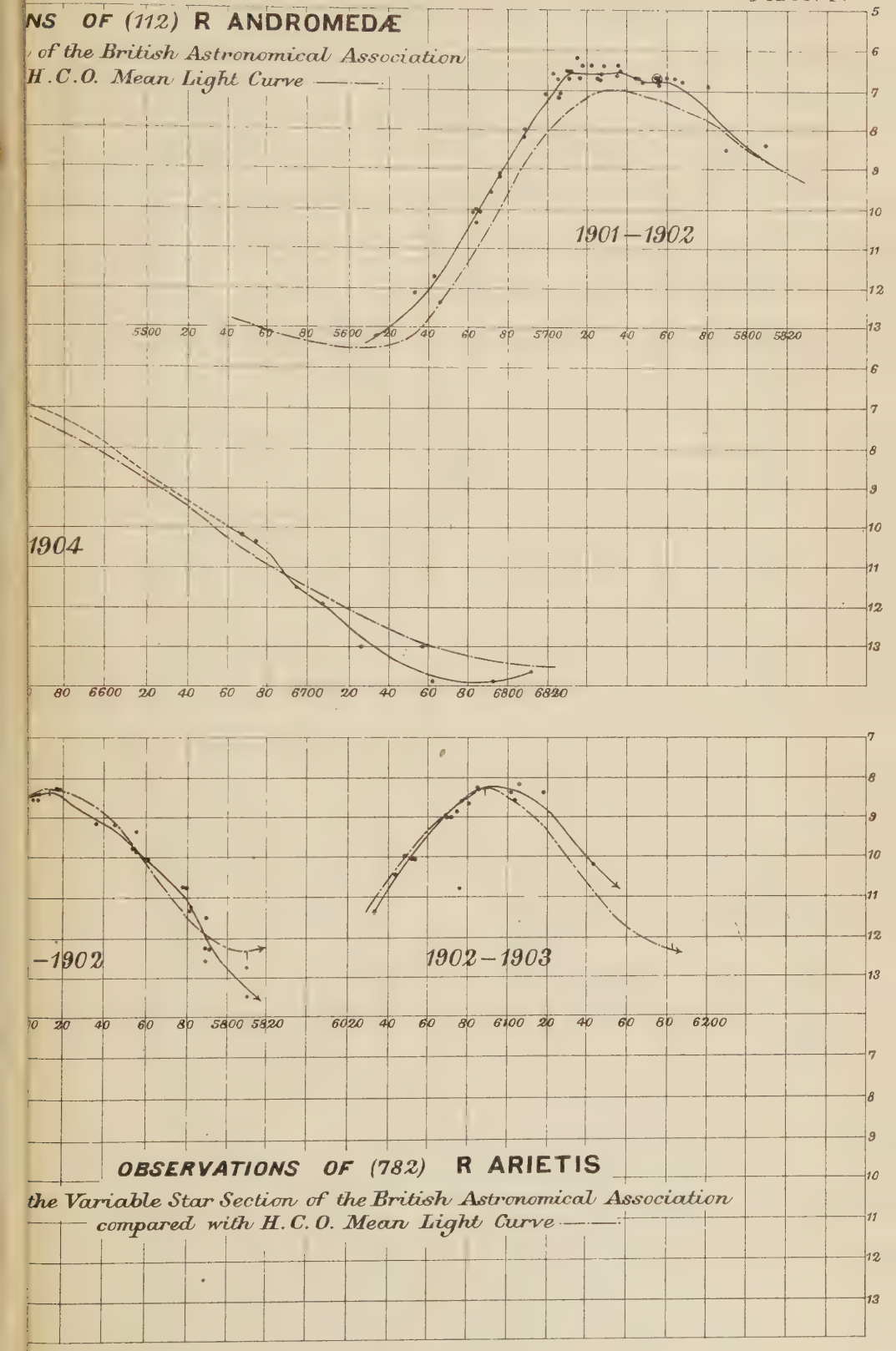
(8600) R CASSIOPELÆ—*continued.*

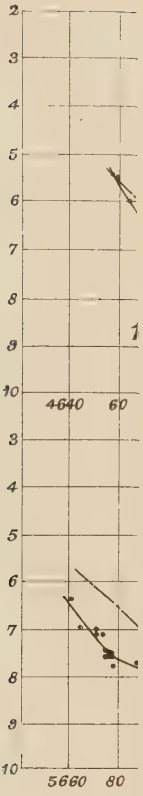
Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1902.									
Jan. 31	5781	T.95	2	Ch.	=m, o+8	9·0	8·2	·8	Very red.
Feb. 9	5790	,,	1	,,	n+2, o+4	9·4	8·5	·9	
,, 28	5809	,,	,,	,,	n−6, o+2, p+6, q+9	9·9	9·0	+ ·9	
July 6	5937	,,	1	,,	q+4	10·6	11·3	−1·2	
Aug. 28	5990	T.	...	Co.	...	*11·8*	10·7	+1·1	
Sept. 4	5997	,,	...	,,	...	*12·0*	9·5	2·5	
,, 21	6014	,,	...	,,	...	*12·0*	9·8	2·2	
,, 28	6021	,,	...	,,	...	*11·8*	9·6	2·2	
Oct. 8	6031	T.95	1	Ch.	o−3, p+2, q+2	10·4	9·1	1·3	
,, 10	6033	,,	,,	,,	p−2, q+3	10·7	9·0	1·7	
,, 21	6044	,,	,,	,,	2+3	11·1	8·4	2·7	
,, 21	6044	T.	...	Co.	...	*11·5*	8·4	3·1	
Nov. 1	6055	T.	1	Ch.	o−8, =q, r+4	10·9	7·5	3·4	
,, 7	6061	,,	...	Co.	...	*9·5*	7·1	2·4	
,, 28	6082	,,	...	,,	...	*8·5*	6·0	2·5	The residuals, generally, are large, but the dates of observed maxima correspond closely with those of the mean cuve.
Dec. 4	6088	,,	...	,,	...	*8·3*	5·9	2·4	
,, 23	6107	T.28	1	Ma.	h−6	7·8	5·8	2·0	
,, 24	6108	T.	...	Co.	...	*8·0*	5·8	2·2	
1903.									
Jan. 3	6118	T.28	1	Ma.	h−9, l−2	8·2	5·9	2·3	
,, 23	6138	T.	,,	Co.	...	*8·5*	6·2	2·3	
Feb. 1	6147	,,	2	,,	...	*9·0*	6·4	2·6	
,, 13	6159	,,	...	,,	...	*9·3*	6·7	2·6	
,, 17	6163	T.28	1	Ma.	R−2·5, n+2·5	9·2	6·8	2·4	
,, 21	6167	T.	...	Co.	...	*9·4*	6·9	2·5	
,, 28	6174	,,	...	,,	...	*9·5*	7·1	2·4	
Mar. 3	6177	T.28	1	Ma.	n+1	9·3	7·2	2·1	
,, 16	6190	T.	2	Co.	...	*9·8*	7·6	2·2	
May 24	6259	,,	...	,,	r−1	11·5	9·5	2·0	
June 21	6287	,,	...	,,	r+1	11·3	10·3	1·0	
July 23	6319	,,	...	,,	...	*13·0*	11·2	1·8	Barely visible in 6½ inch.
Aug. 25	6352	,,	..	,,	r−6	12·0	11·9	·1	
Sept. 12	6370	,,	...	,,	...	*12·0*	11·8	·2	
,, 18	6376	,,	...	,,	...	*12·5*	11·7	·8	
Oct. 15	6403	,,	...	,,	...	*11·8*	11·2	·6	
,, 25	6413	,,	...	,,	...	*11·6*	11·0	·6	
Nov. 16	6435	,,	...	,,	...	*11·3*	10·2	1·1	
Dec. 11	6460	,,	...	,,	...	*11·3*	9·3	2·0	

(8600) R CASSIOPEIÆ—*continued.*

Date.	Julian Date.	Inst.	Class.	Observer.	Comparisons.	Deduced Mag.	Calc. Mag.	O—C.	Remarks.
1903.									
Dec. 24	6473	T.	...	Co.	...	*9·8*	8·7	1·1	
1904.									
Jan. 10	6490	,,	...	,,	...	*8·0*	7·4	+ ·6	
,, 16	6496	T.28	I	Ma.	h+4	6·8	7·0	− ·2	
,, 22	6502	T.	...	Co.	...	*7·5*	6·6	+ ·9	
Feb. 6	6517	T.	...	Co.	...	*6·0*	6·0	0	
,, 13	6524	,,	...	,,	...	*5·8*	5·8	0	
Mar. 10	6550	,,	...	,,	...	*6·0*	5·9	+ ·1	
,, 21	6561	,,	...	,,	...	*6·2*	6·0	·2	
June 3	6635	,,	...	,,	...	*9·0*	7·9	1·1	
July 5	6667	,,	...	,,	...	*10·5*	8·8	1·7	
,, 12	6674	,,	...	,,	...	*10·0*	9·0	1·0	
Aug. 2	6695	,,	...	,,	...	*11·0*	9·6	1·4	
,, 3	6696	T.28	I	Ma.	o−5	10·4	9·6	·8	
,, 8	6701	,,	,,	,,	p+1	10·4	9·8	·6	
,, 11	6704	,,	,,	,,	p+2	10·3	9·8	·5	
,, 14	6707	T.	...	Co.	...	*11·3*	9·9	1·4	
,, 17	6710	T.28	I	Ma.	o−3, p+3	10·2	10·0	·2	
,, 18	6711	,,	,,	,,	o−3, p+3	10·2	10·0	+ ·2	
Sept. 3	6727	,,	,,	,,	o−3, p+3	10·2	10·5	− ·3	
,, 3	6727	T.	...	Co.	...	*12·0*	10·5	+1·5	
,, 15	6739	T.28	I	Ma.	=p	10·5	10·8	− ·3	
Oct. 3	6757	,,	,,	,,	=q	11·0	11·3	·3	Difficult.
,, 29	6783	T.	...	Co.	...	...	11·8	...	Invisible in 6½ inch.
Dec. 5	6820	,,	...	,,	...	...	11·5	...	Doubtfully visible.
,, 10	6825	T.28	I	Ma.	R−3, N+2	9·1	11·4	−2·3	*

(*Published* 12*th December* 1906.)


NS OF (112) R ANDROMEDÆ
of the British Astronomical Association
H.C.O. Mean Light Curve
1901—1902
1904
1902—1903
OBSERVATIONS OF (782) R ARIETIS
the Variable Star Section of the British Astronomical Association
compared with H.C.O. Mean Light Curve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4640 60
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9
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5660 80


7
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9
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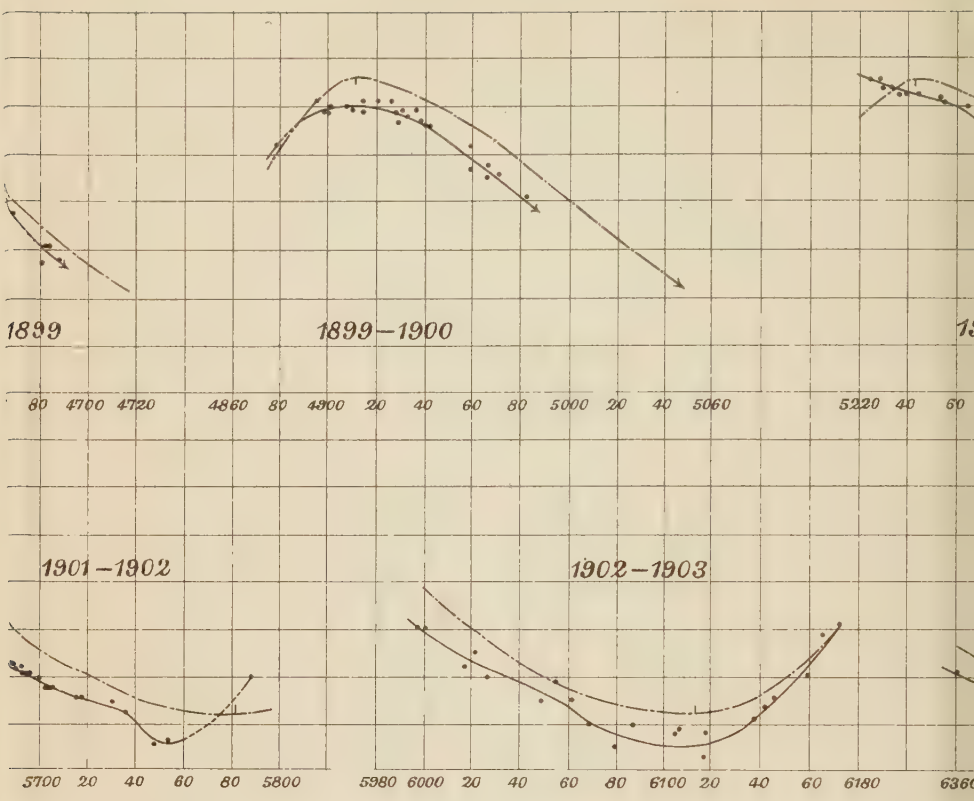
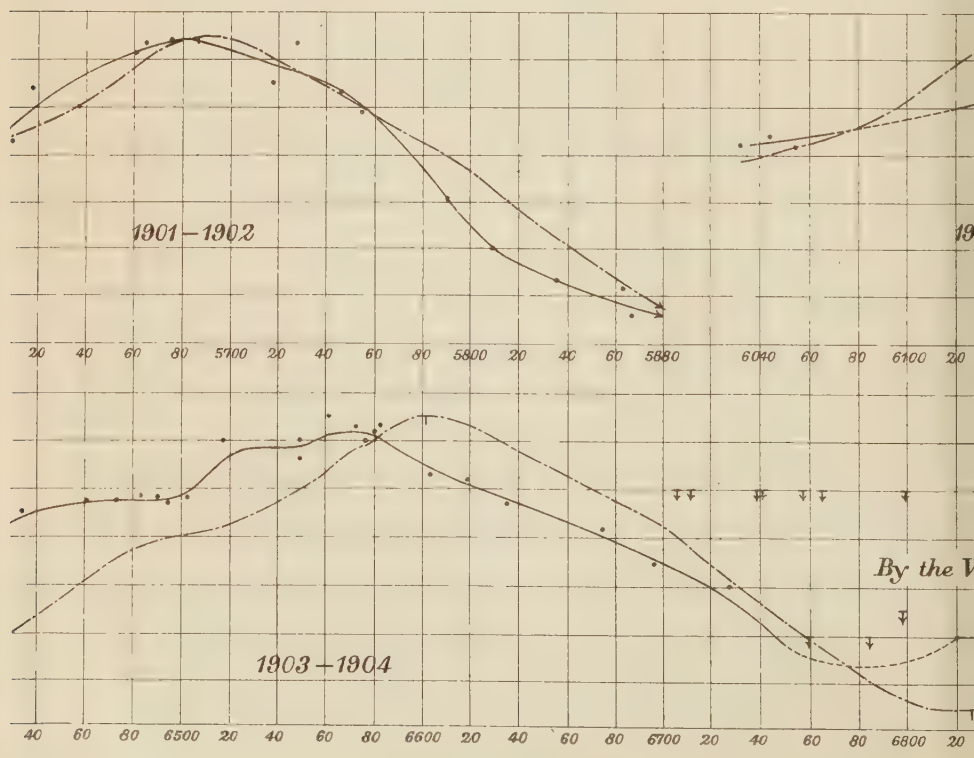
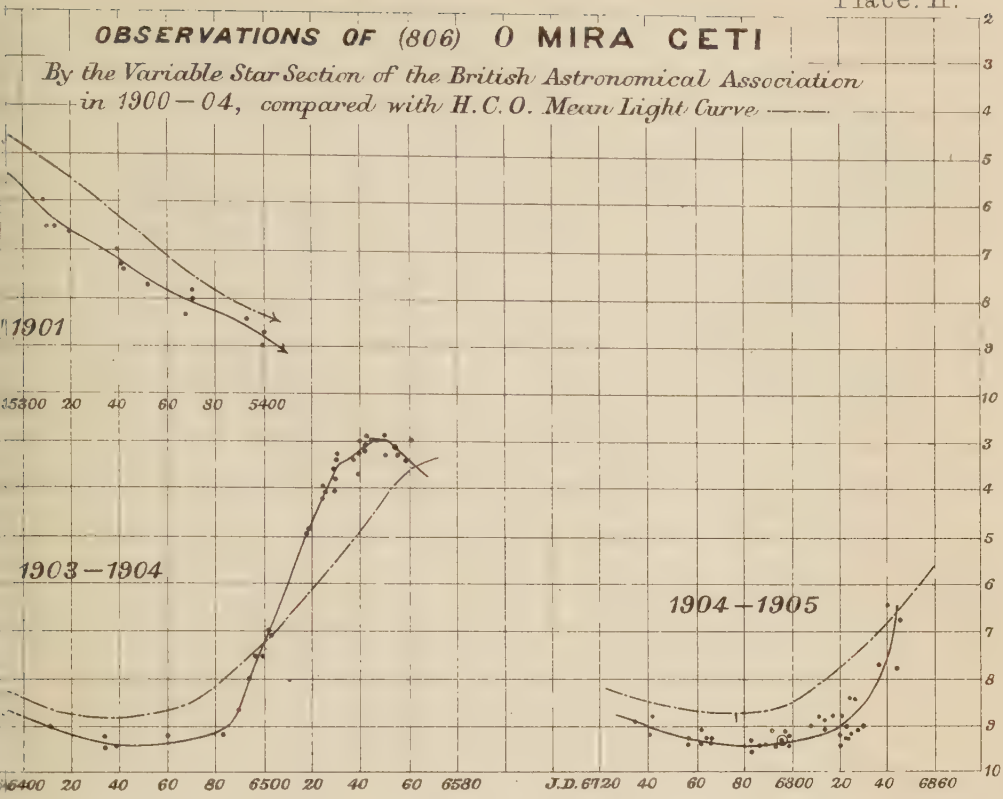
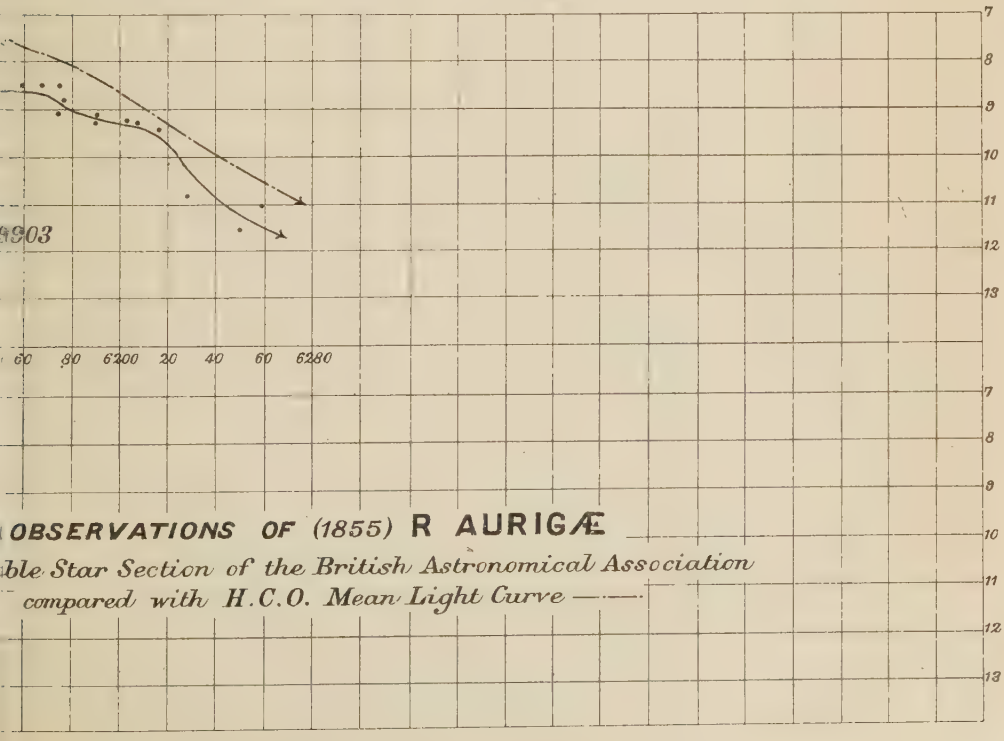
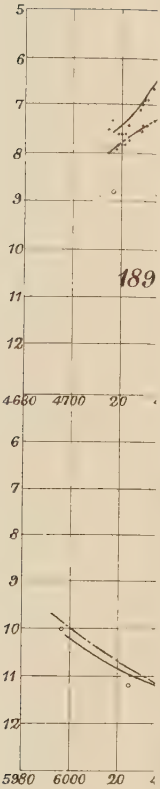
11
12
13
1900
5284 5600
7
8
9
10
11
12
13
6400 20


1899
1899–1900
80 4700 4720
4860 80 4900 20 40 60 80 5000 20 40 5060
5220 40 60
1901–1902
1902–1903
5700 20 40 60 80 5800
5980 6000 20 40 60 80 6100 20 40 60 6180


1901–1902
20 40 60 80 5700 20 40 60 80 5800 20 40 60 5880
6040 60 80 6100 20
By the W
1903–1904
40 60 80 6500 20 40 60 80 6600 20 40 60 80 6700 20 40 60 80 6800 20


OBSERVATIONS OF (806) O MIRA CETI
By the Variable Star Section of the British Astronomical Association
in 1900 – 04, compared with H.C.O. Mean Light Curve
1901
1903 – 1904
1904 – 1905
J.D. 6120 40 60 80 6800 20 40 6860


OBSERVATIONS OF (1855) R AURIGÆ
compared with H.C.O. Mean Light Curve


5
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4680 4700 20
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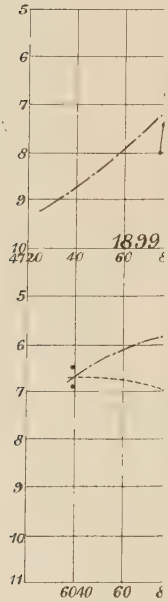
12
5980 6000 20


5
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1899
4720 40 60
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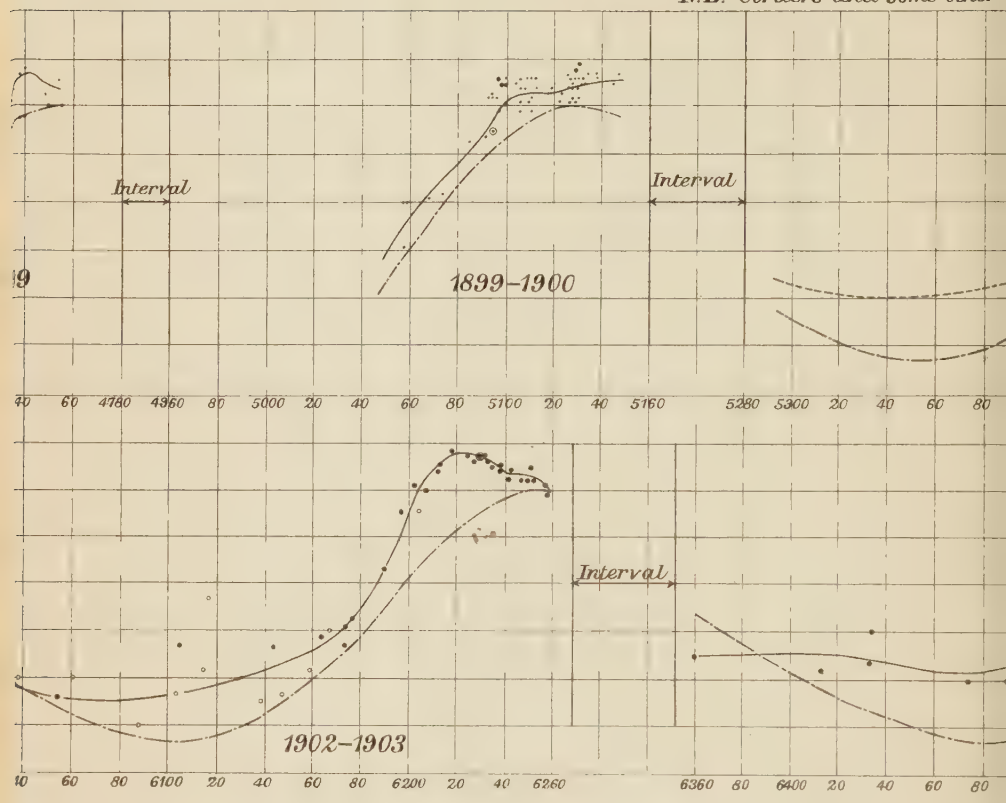
11
6040 60

OBSERVATIONS OF

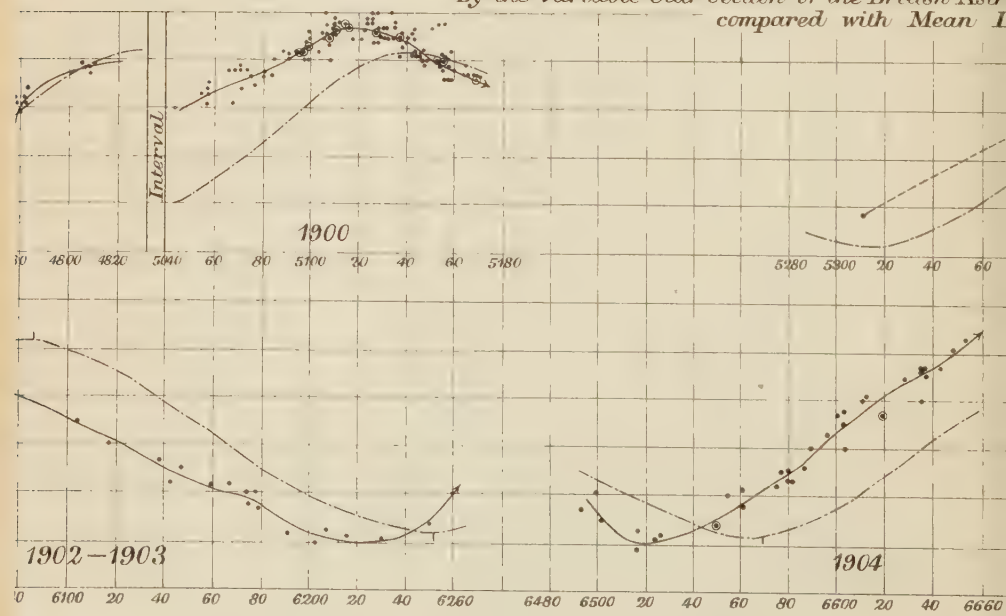
By the Variable Star Section of the British

N.B. Corder's and some other



OBSERVATIONS OF (3493

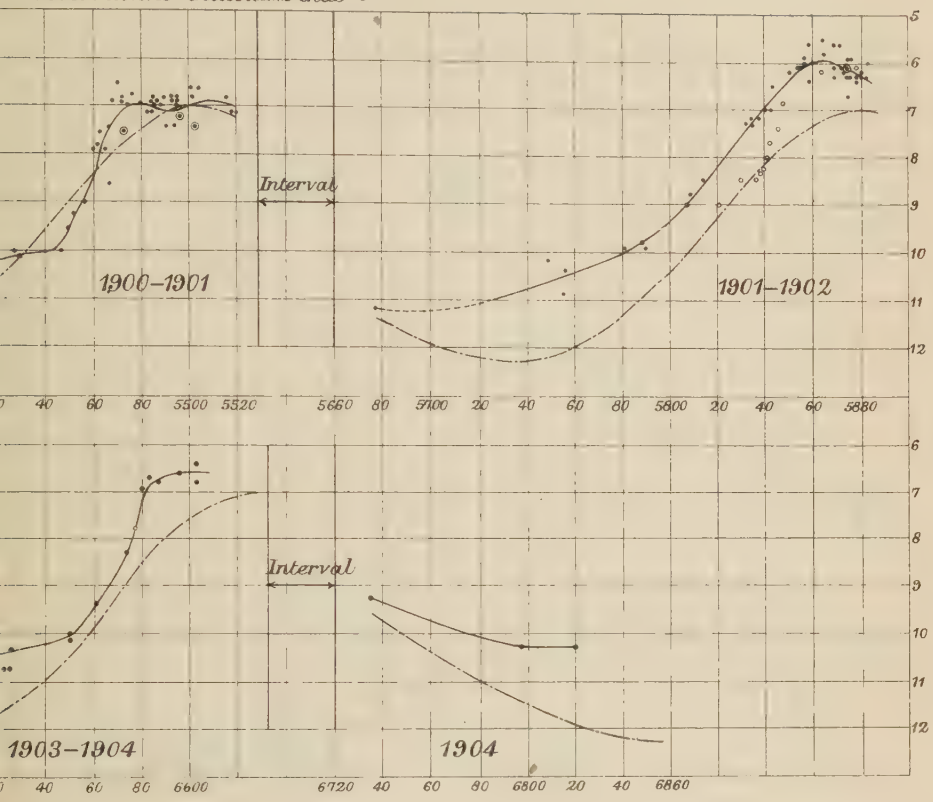
By the Variable Star Section of the British Astr
compared with Mean I



U ORIONIS

omical Association in 1900–1904

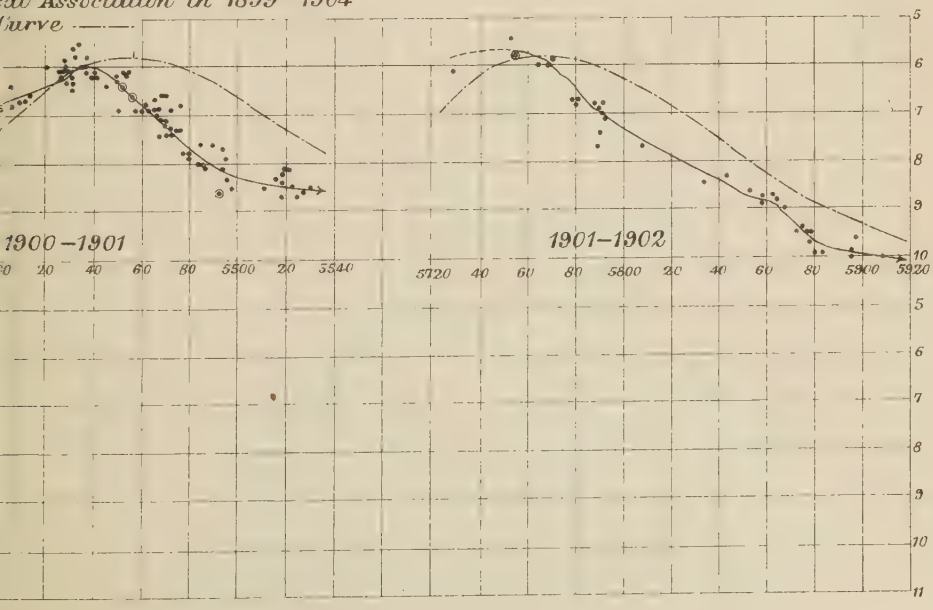
l Observations indicated thus •

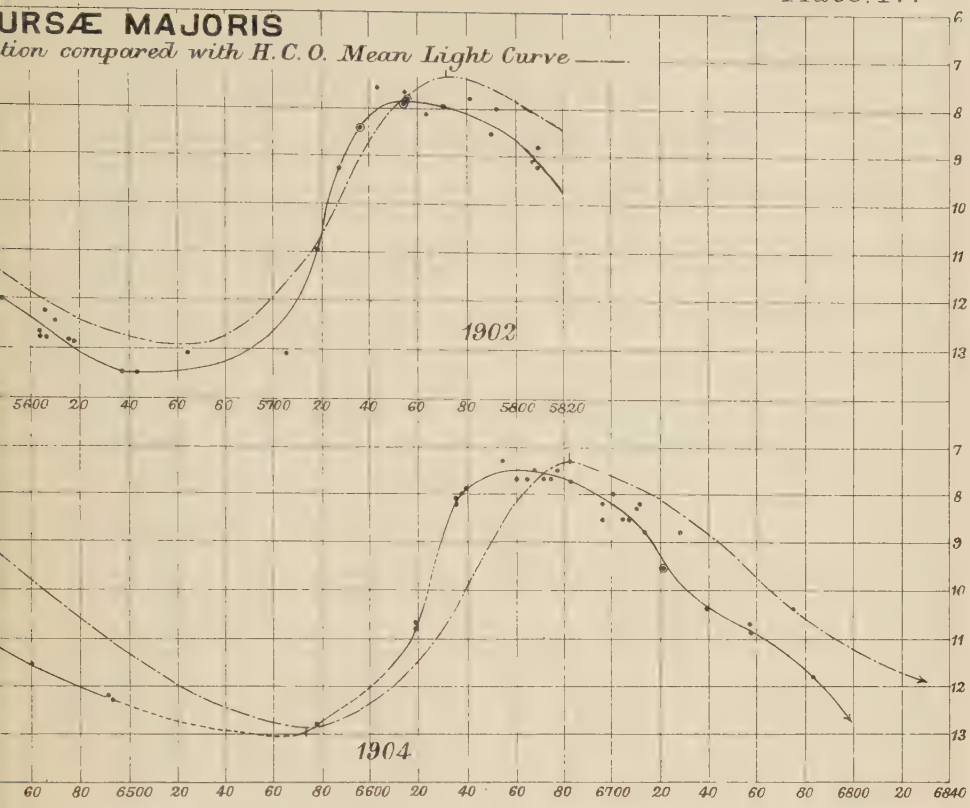


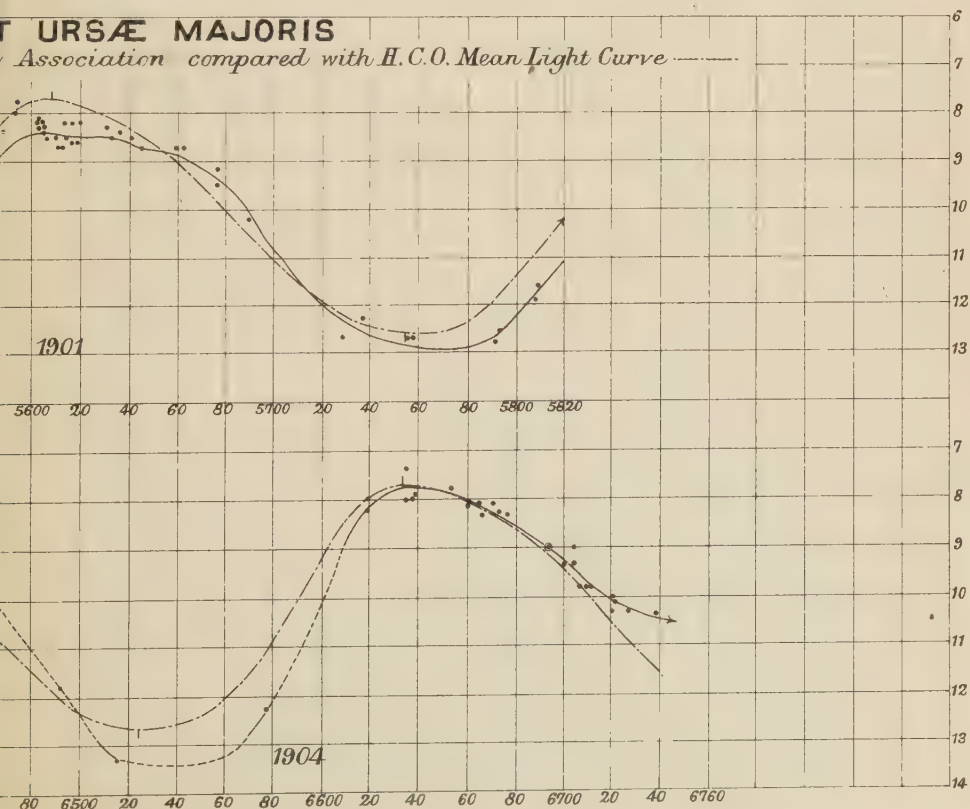
LEONIS

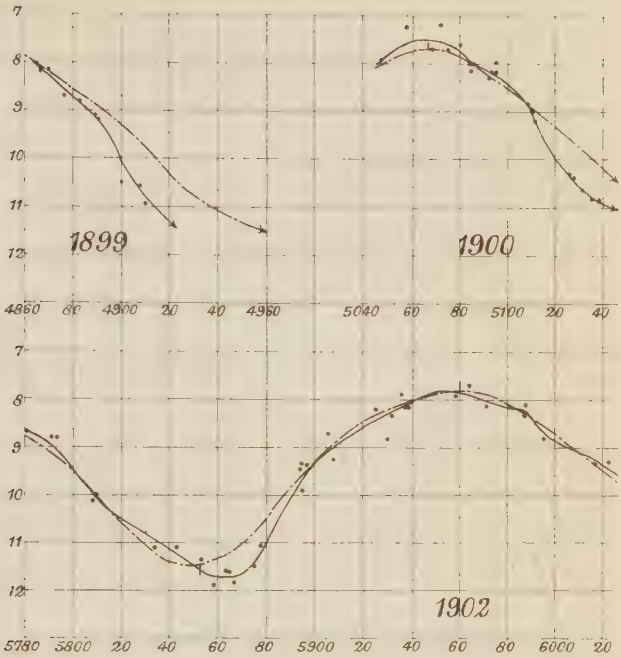
cal Association in 1899–1904

Curve ——



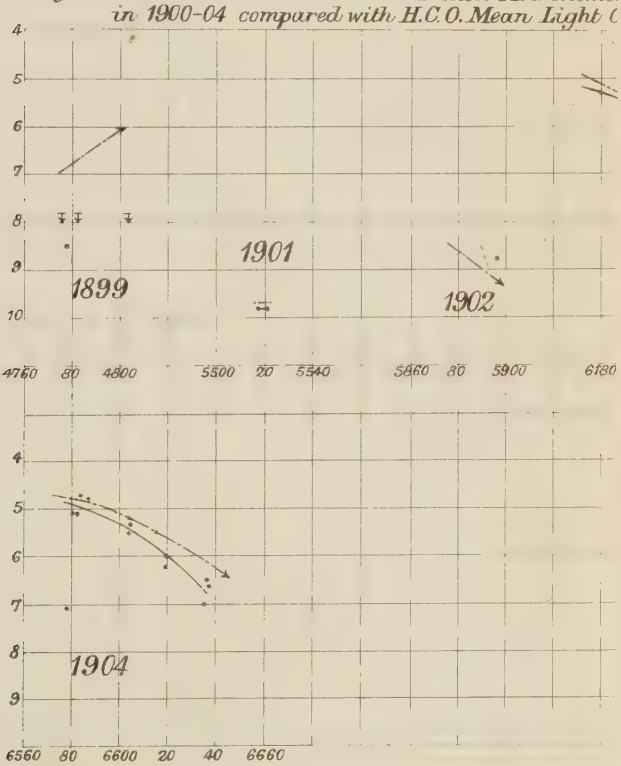

URSÆ MAJORIS
tion compared with H.C.O. Mean Light Curve
1902
1904
5600 20 40 60 80 5700 20 40 60 80 5800 5820
60 80 6500 20 40 60 80 6600 20 40 60 80 6700 20 40 60 80 6800 20 6840


T URSÆ MAJORIS
Association compared with H.C.O. Mean Light Curve
1901
1904
5600 20 40 60 80 5700 20 40 60 80 5800 5820
80 6500 20 40 60 80 6600 20 40 60 80 6700 20 40 6760



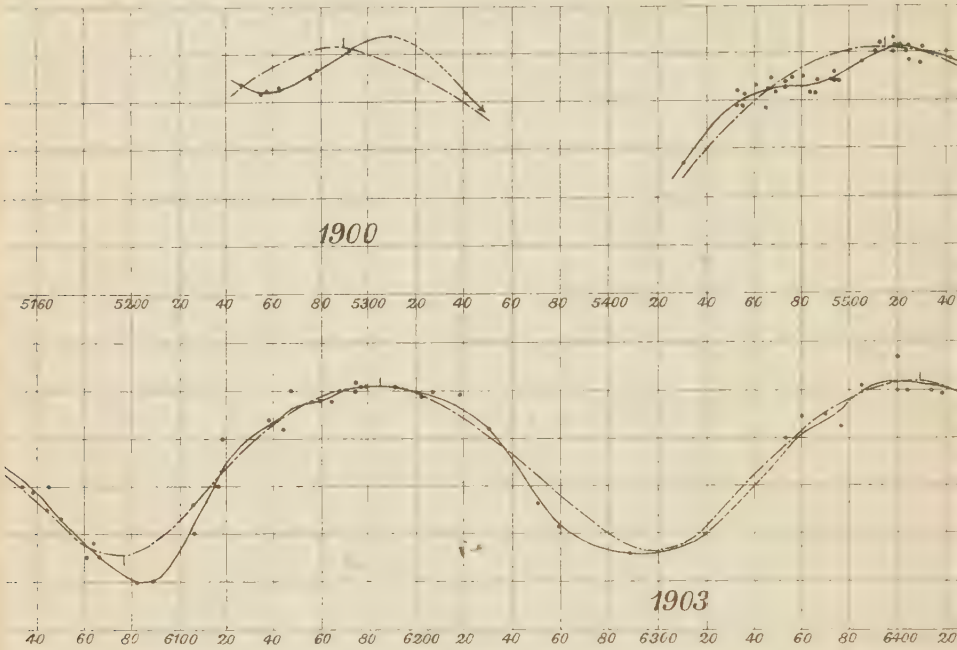
OBSERVATIONS OF (4826) R HY

By the Variable Star Section of the British Astronomi
in 1900-04 compared with H.C.O. Mean Light (



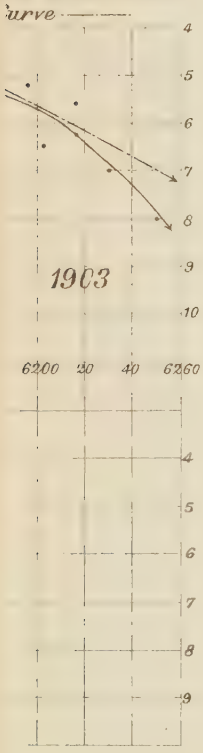
OBSERVATIONS OF (4557) S URSÆ M

By the Variable Star Section of the British Astronomical Association compare



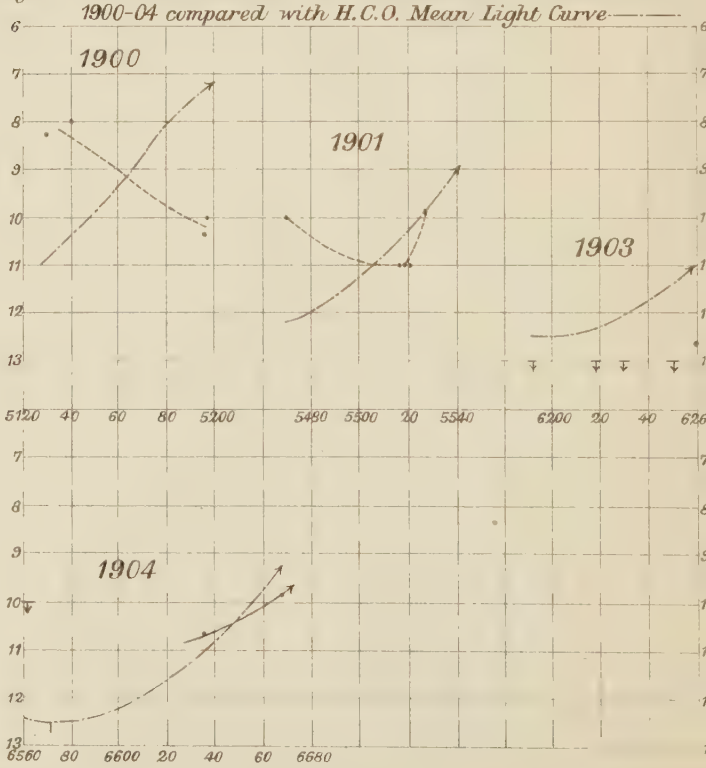
DRAE

cal Association
Curve

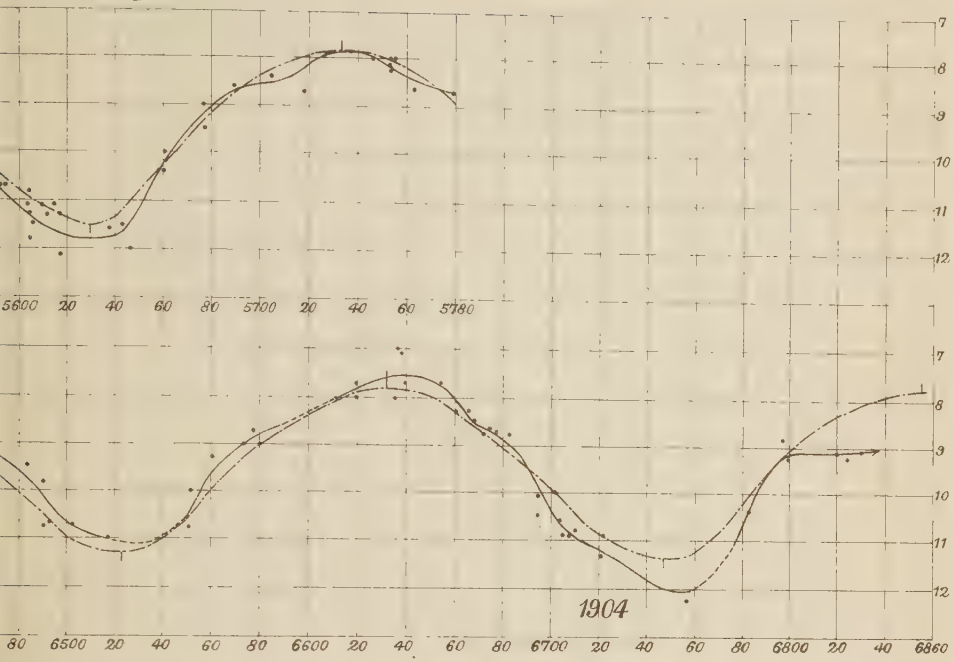


OBSERVATIONS OF (4847) S VIRGINIS

By the Variable Star Section of the British Astronomical Association in 1900-04 compared with H.C.O. Mean Light Curve



H.C.O. Mean Light Curve ———



OBSERVATIONS OF (5237) R BOOTIS

By the Variable Star Section of the British Astronomical Association compared with H.C.O. Mean Light Curve ———

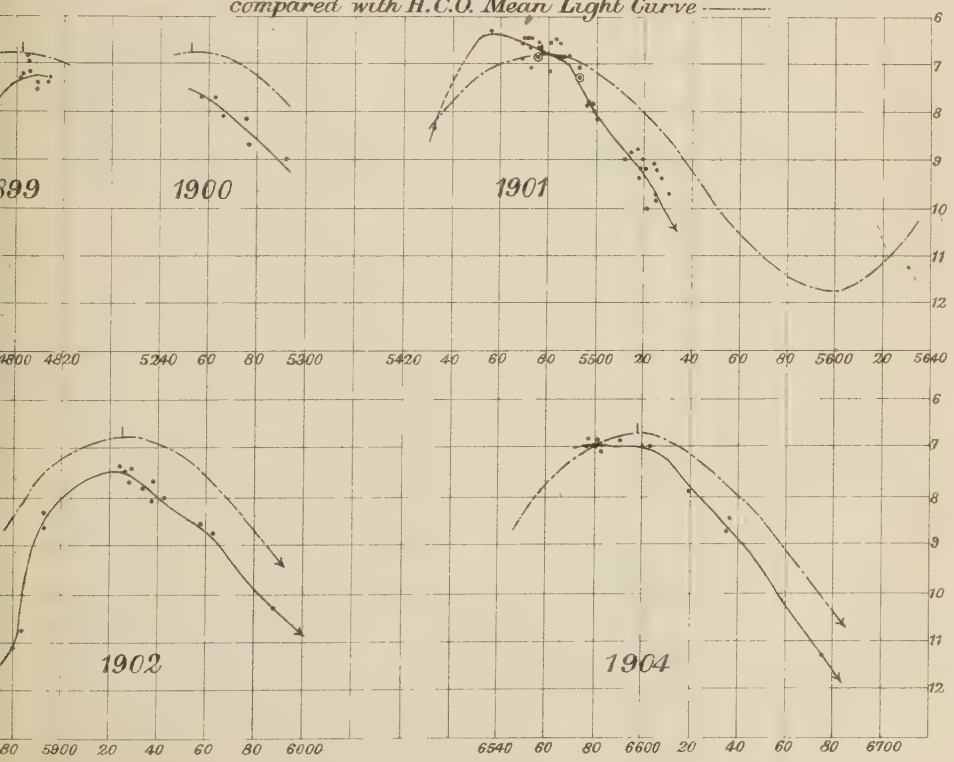
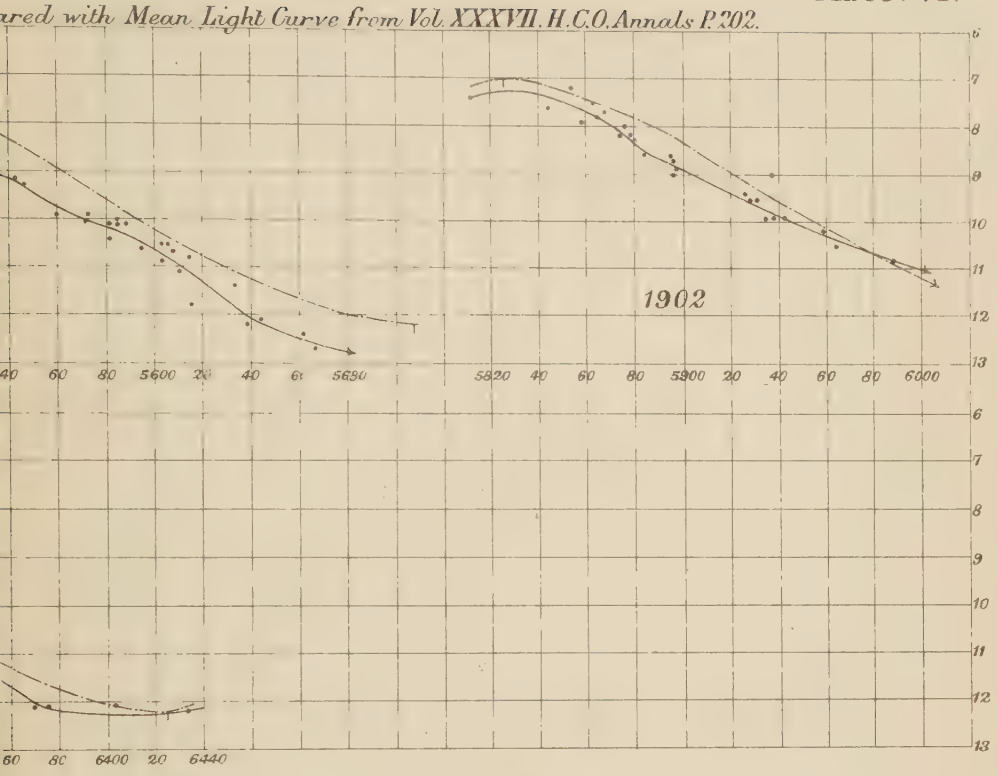


Plate. VI.

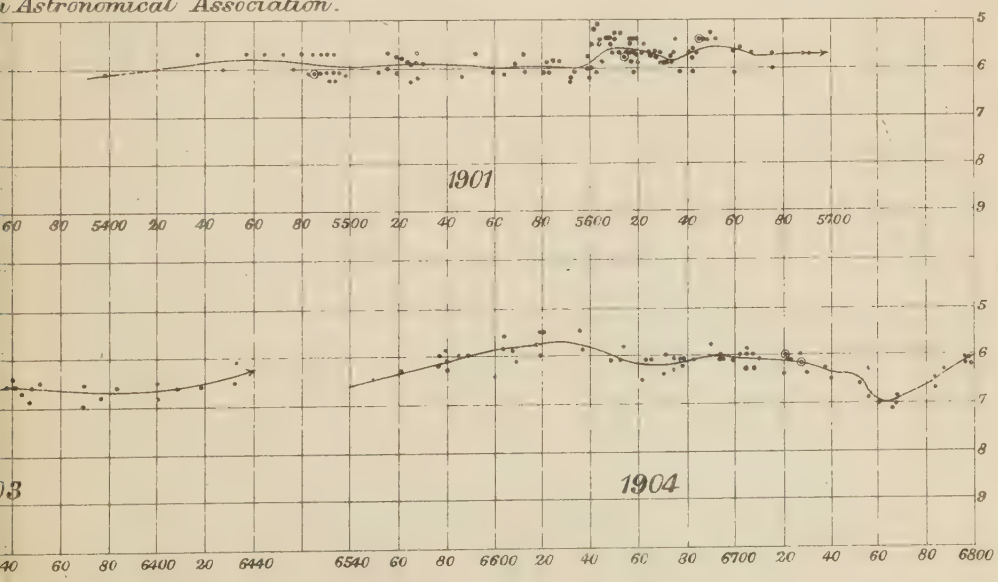
) S CORONÆ

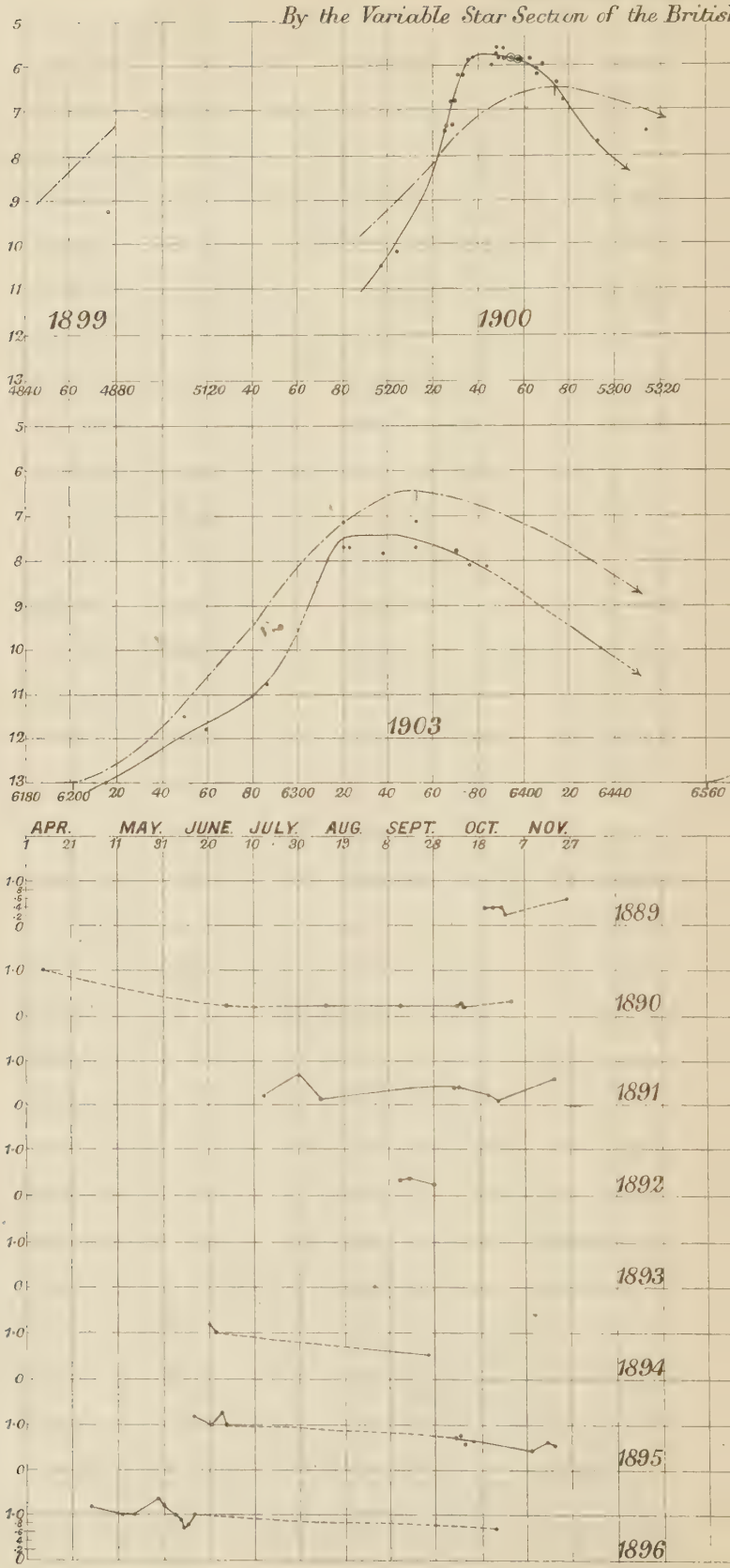
ared with Mean Light Curve from Vol XXXVII. H.C.O. Annals P. 202.



R CORONÆ

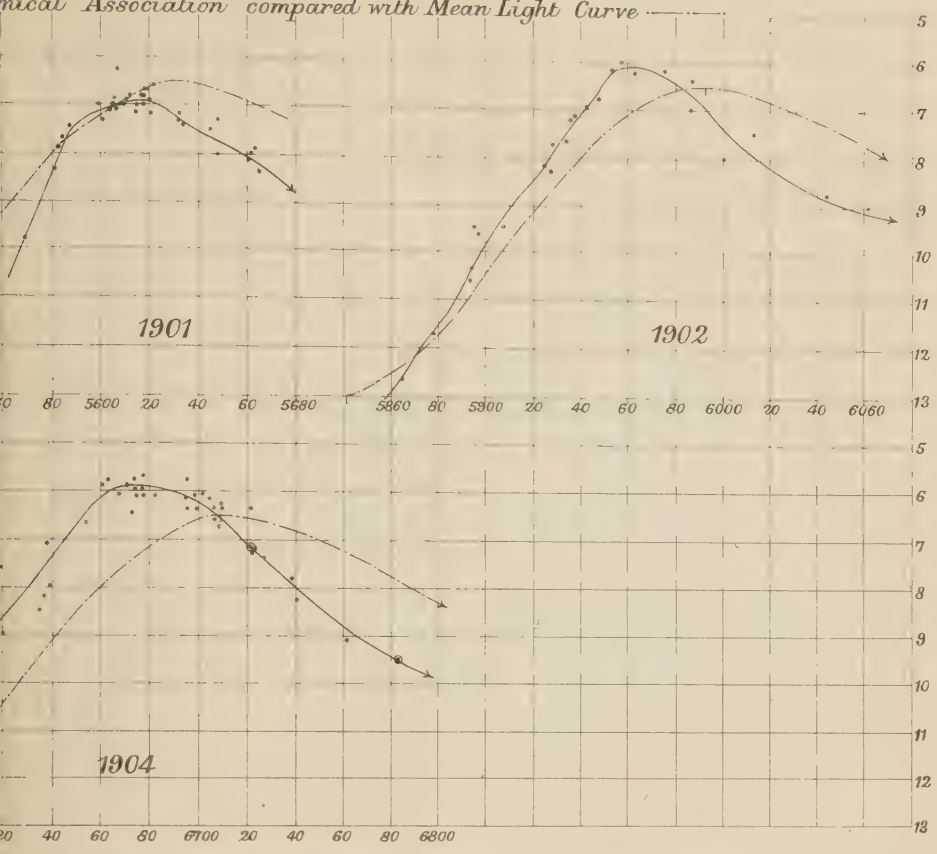
n Astronomical Association.

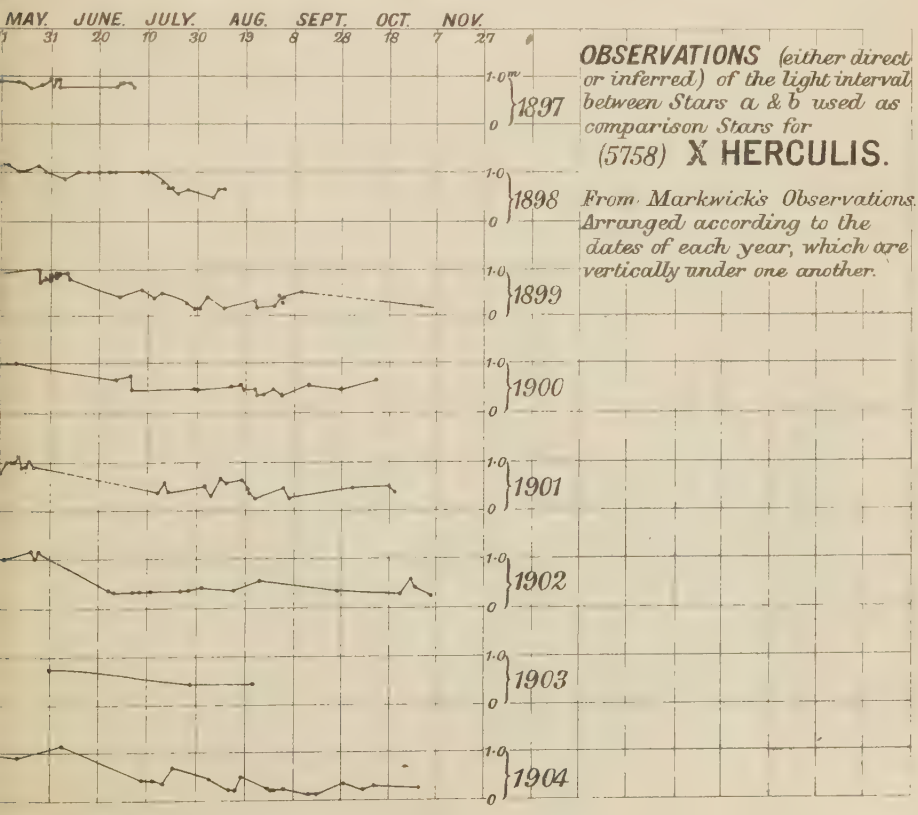



1899
1900
1903
APR. MAY. JUNE. JULY. AUG. SEPT. OCT. NOV.
1889
1890
1891
1892
1893
1894
1895
1896

7) R SERPENTIS

nical Association compared with Mean Light Curve ——·——

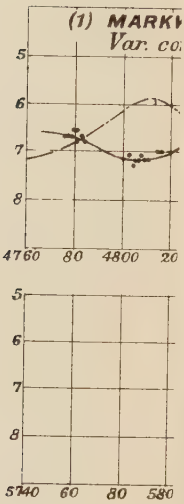


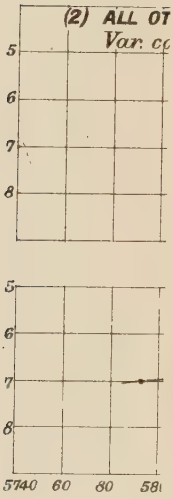


OBSERVATIONS *(either direct or inferred) of the light interval between Stars a & b used as comparison Stars for*

(5758) X HERCULIS.

From Markwick's Observations. Arranged according to the dates of each year, which are vertically under one another.


(1) MARKI
Var. co
5
6
7
8
4760
80
4800
20
5
6
7
8
5740
60
80
580


(2) ALL OT
Var. co
5
6
7
8
5
6
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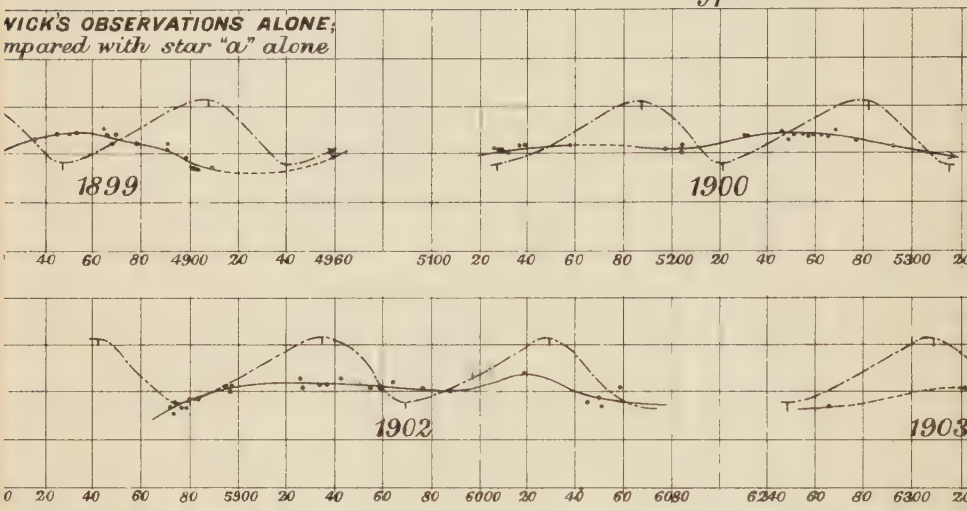
5740
60
80
581

OBSERVATIONS OF (5758

By the Variable Star Section of the Briti

Typical Curve



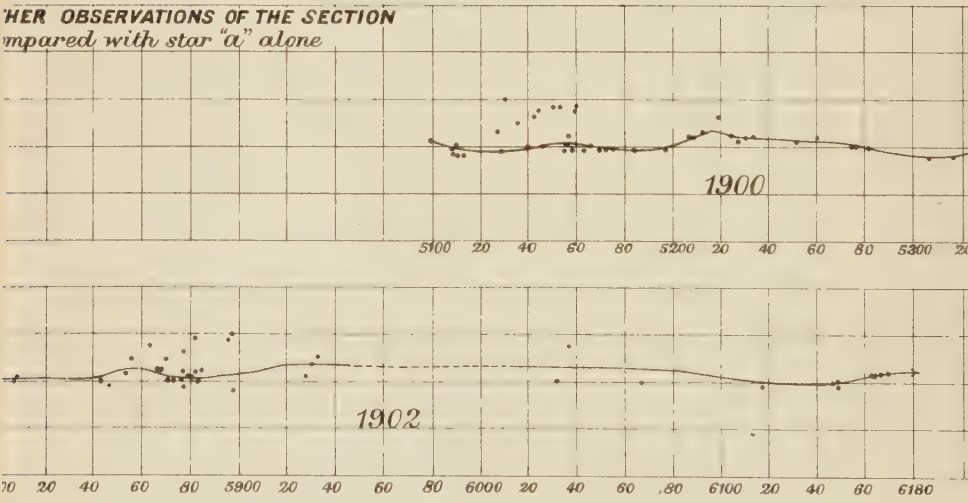
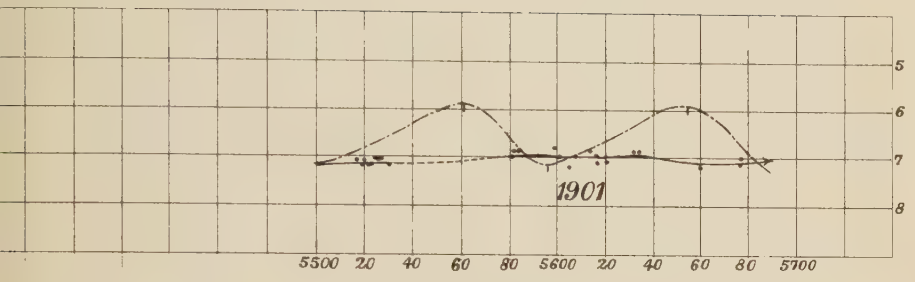
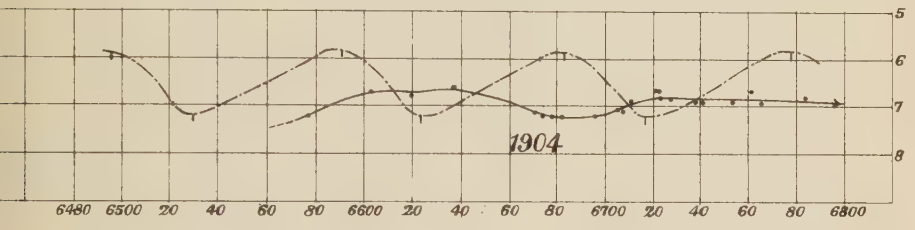
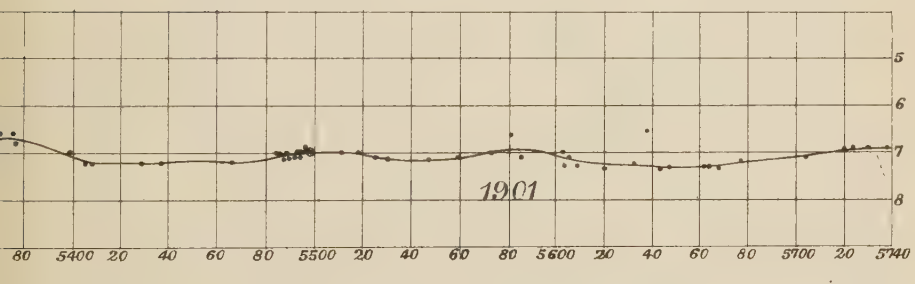


Plate. VIII.


1901
5
6
7
8
5500 20 40 60 80 5600 20 40 60 80 5700


1904
5
6
7
8
6480 6500 20 40 60 80 6600 20 40 60 80 6700 20 40 60 80 6800


1901
5
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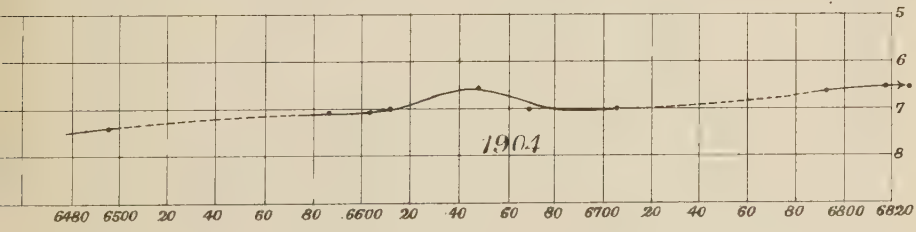
7
8
80 5400 20 40 60 80 5500 20 40 60 80 5600 20 40 60 80 5700 20 5740


1904
5
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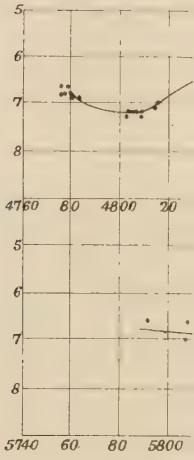
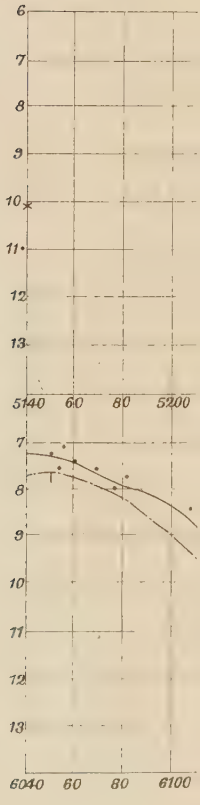
7
8
6480 6500 20 40 60 80 6600 20 40 60 80 6700 20 40 60 80 6800 6820


5
6
7
8
4760 80 4800 20
5
6
7
8
5740 60 80 5800


6
7
8
9
10
11
12
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5140 60 80 5200
7
8
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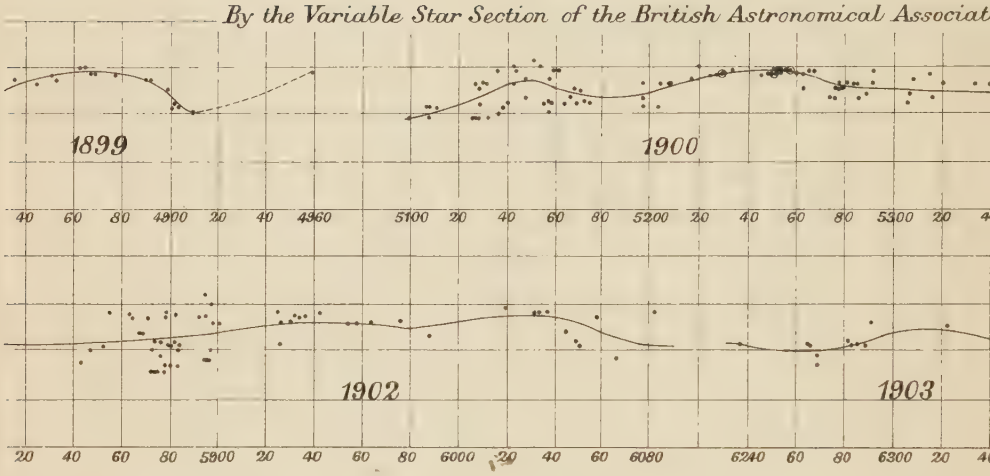
13
6040 60 80 6100

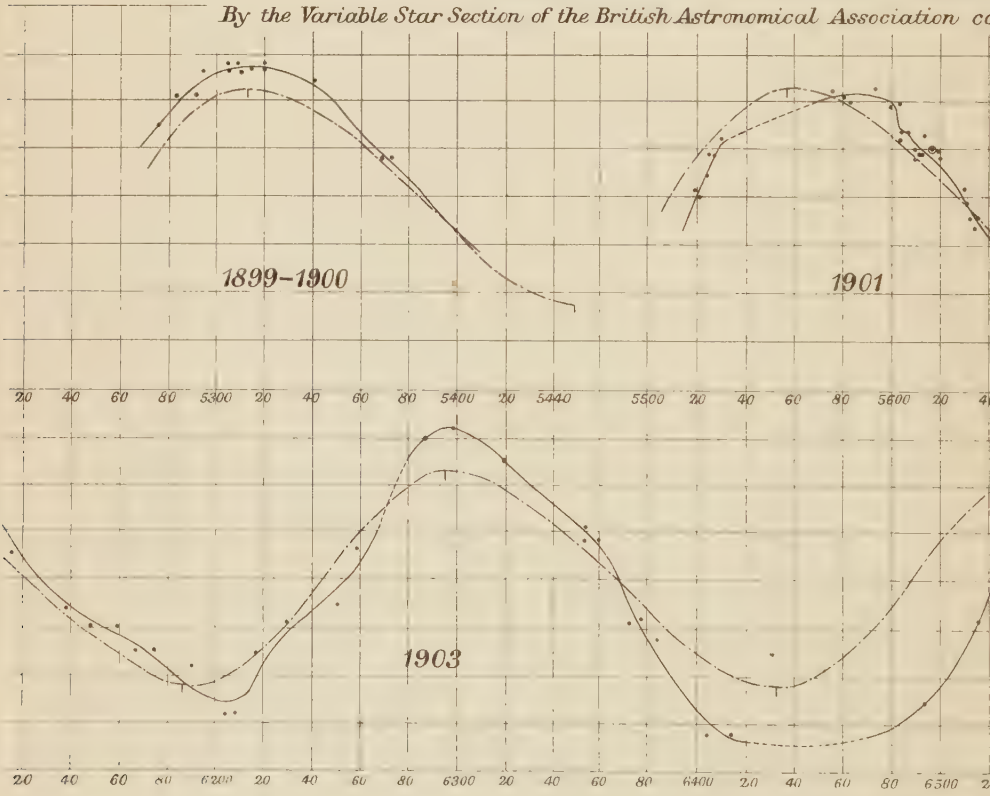
OBSERVATIONS OF (5758) X

By the Variable Star Section of the British Astronomical Associat



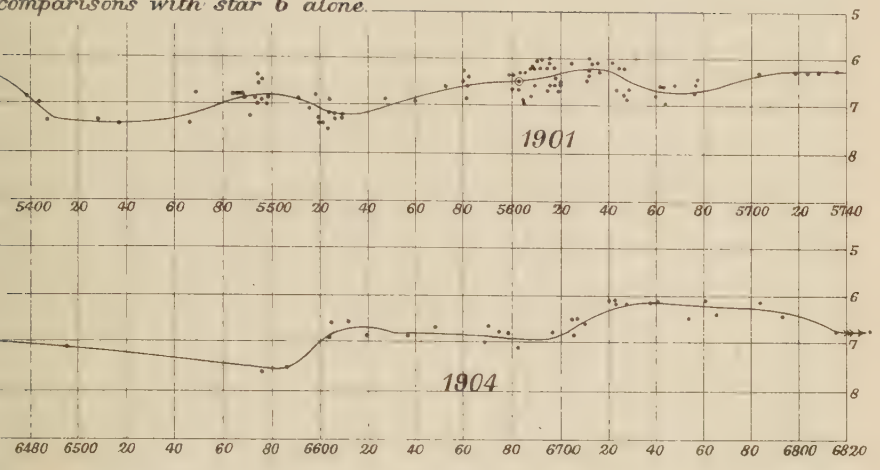
OBSERVATIONS OF (5955) R DR

By the Variable Star Section of the British Astronomical Association co



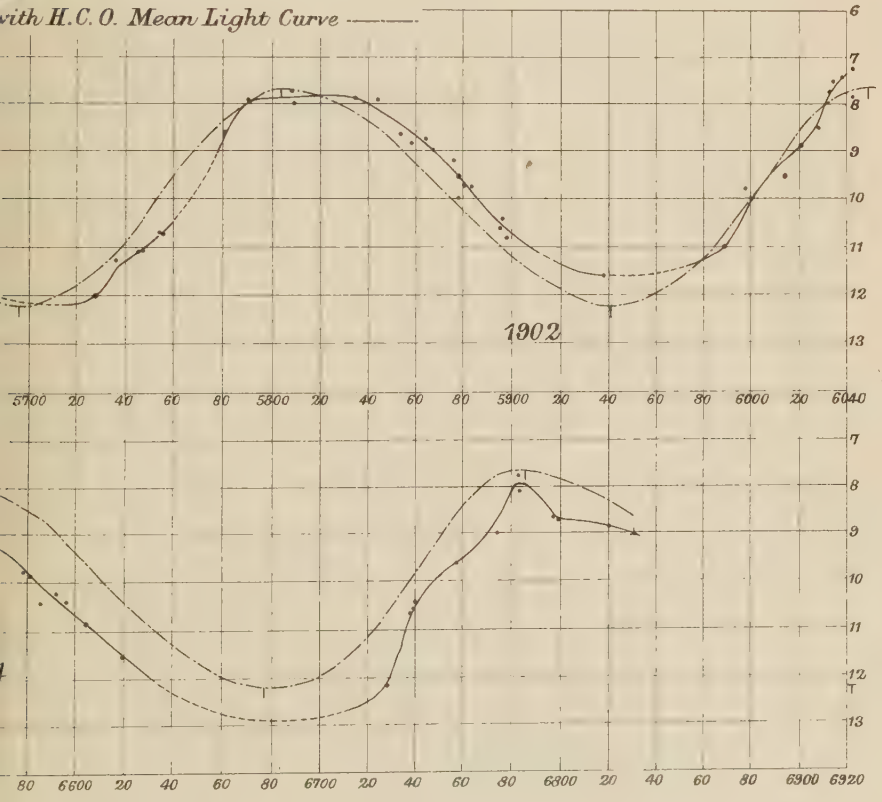
JLIS

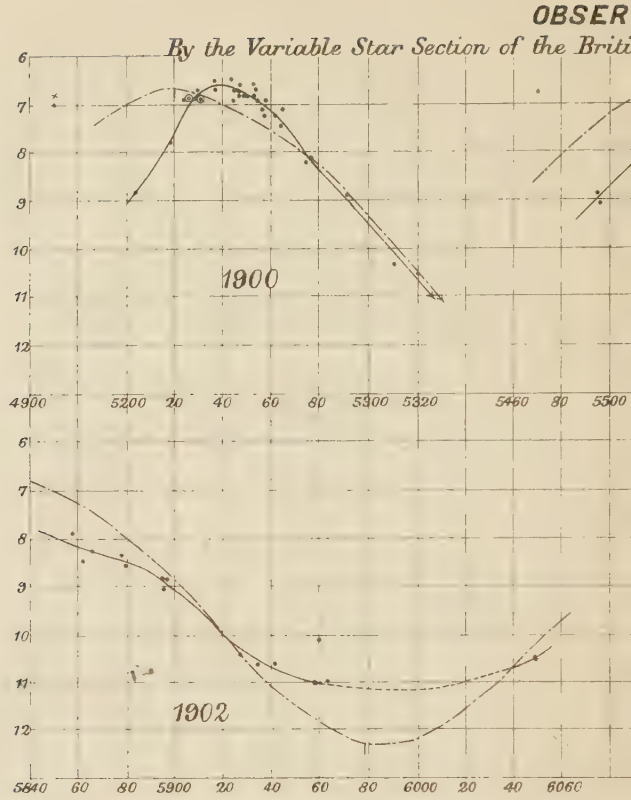
comparisons with star "b" alone.

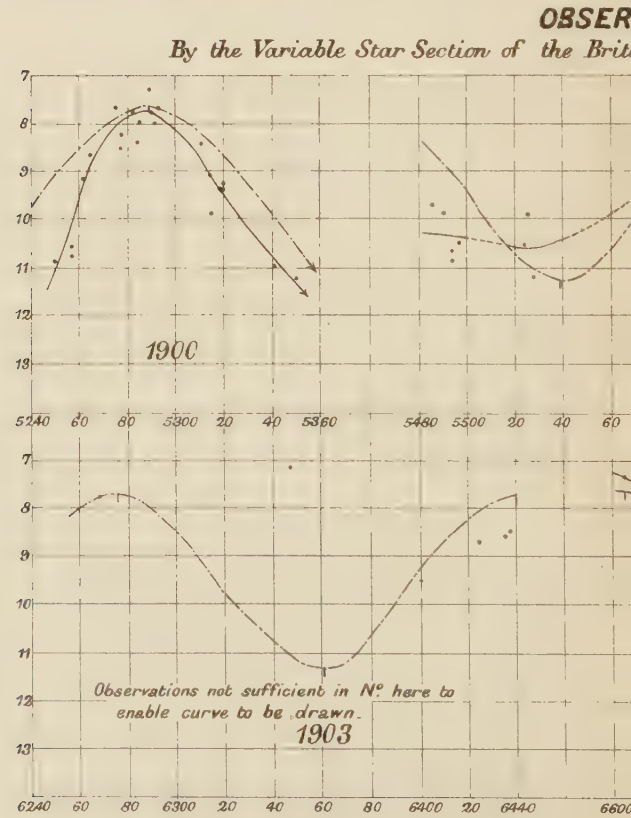


S

with H.C.O. Mean Light Curve

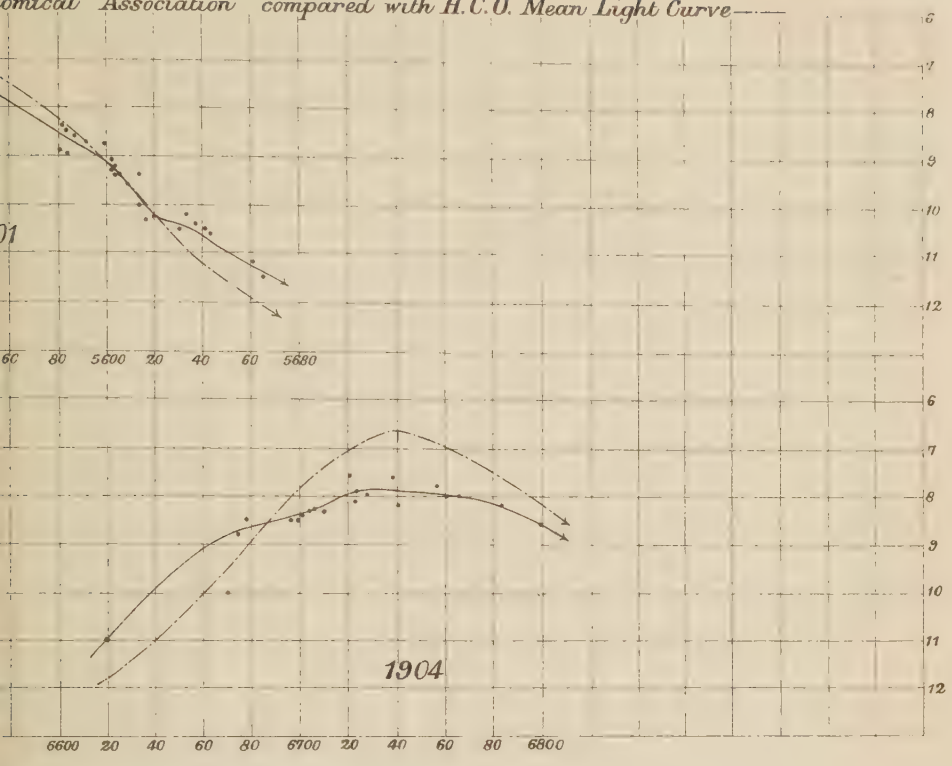



OBSER
By the Variable Star Section of the Briti
1900
1902


OBSER
By the Variable Star Section of the Brit
1900
Observations not sufficient in N° here to
enable curve to be drawn.
1903

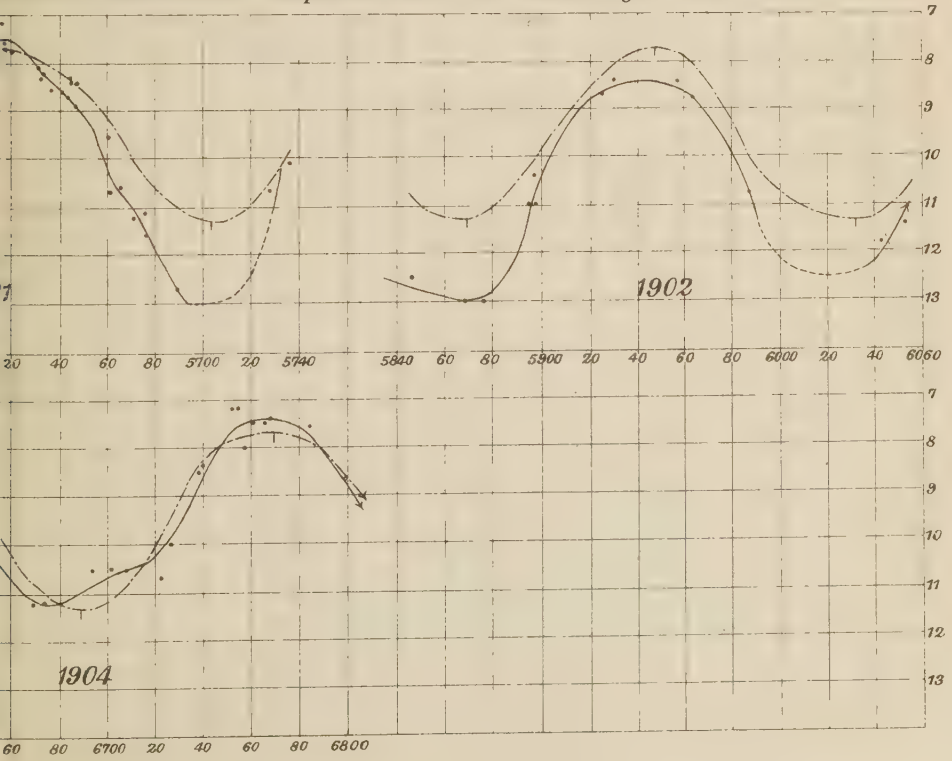
S OF (6044) S HERCULIS

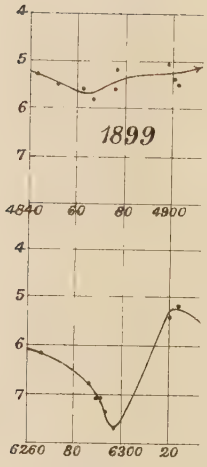
omical Association compared with H.C.O. Mean Light Curve



S OF (6512) T HERCULIS

nomical Association compared with H.C.O. Mean Light Curve




4
5
6
7
1899
4840
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80
4900
4
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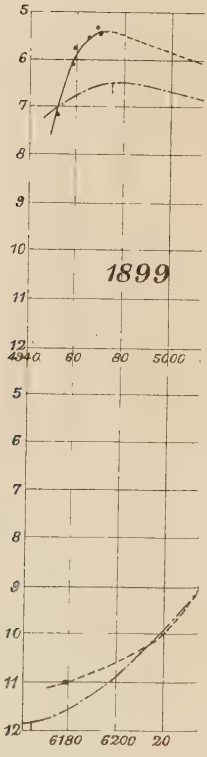
6
7
6260
80
6300
20


5
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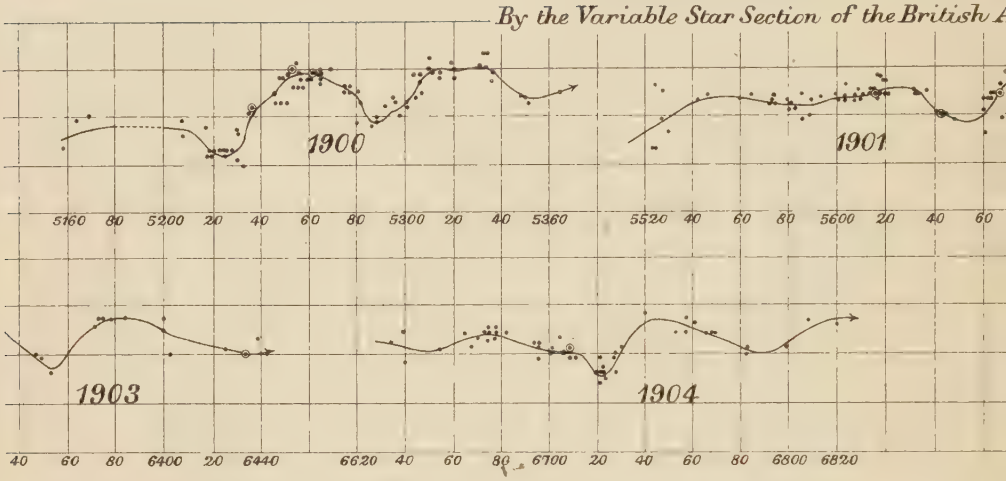
12
6180
6200
20

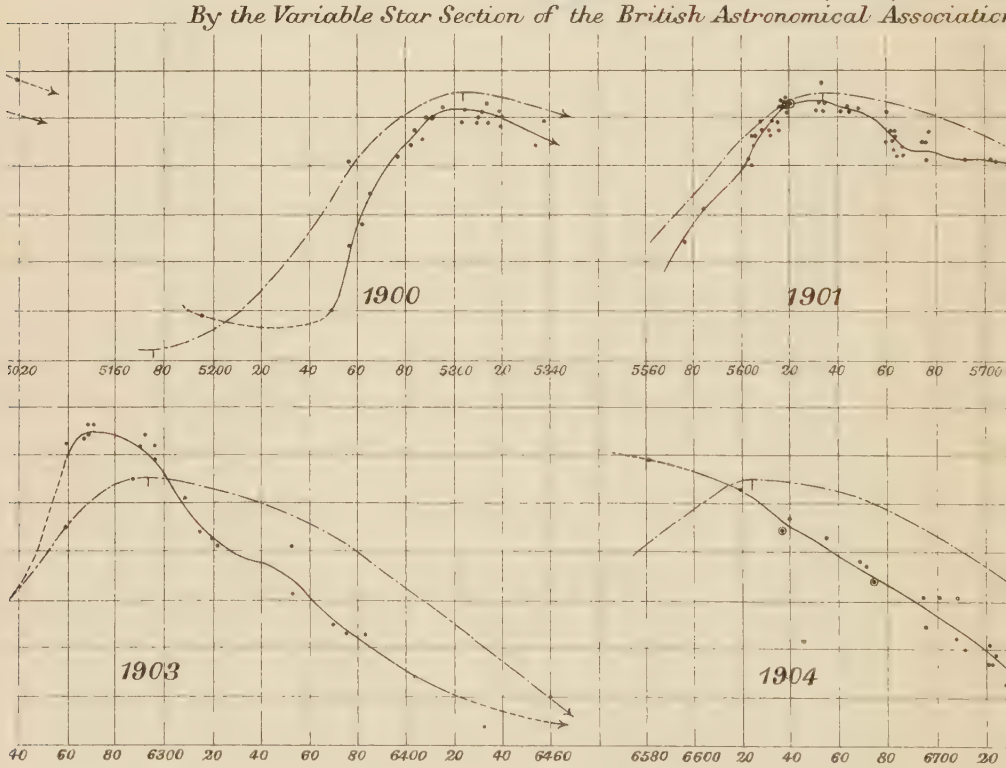
OBSERVATIONS OF (6733) R

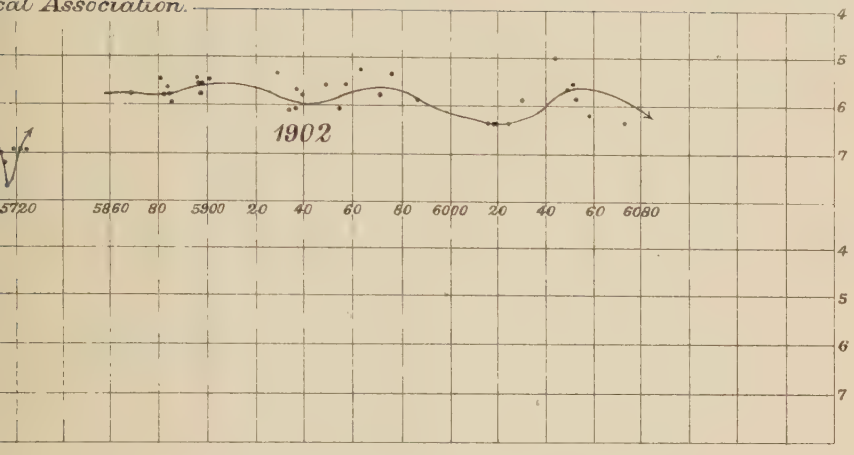
By the Variable Star Section of the British A

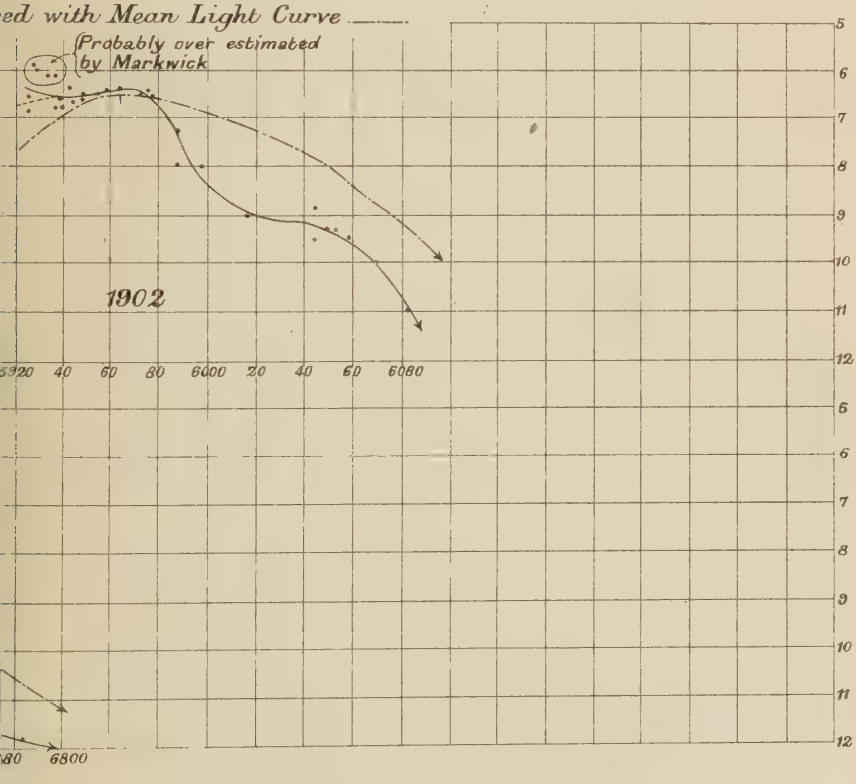


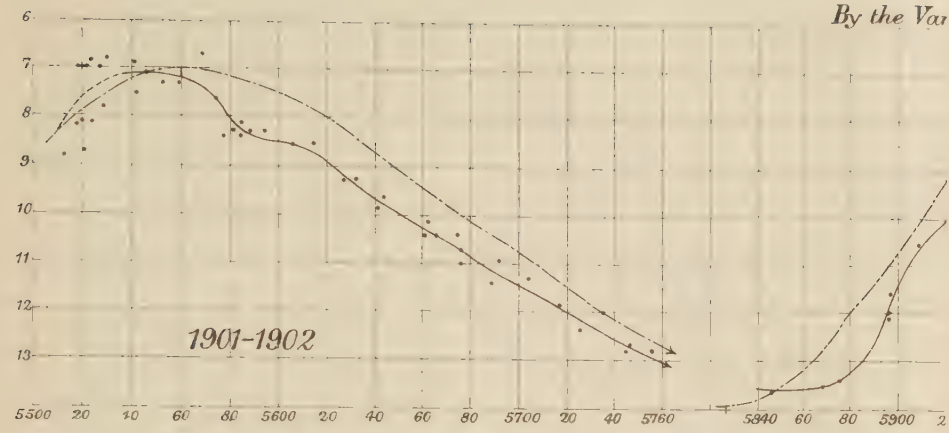
OBSERVATIONS OF (6849) R A(

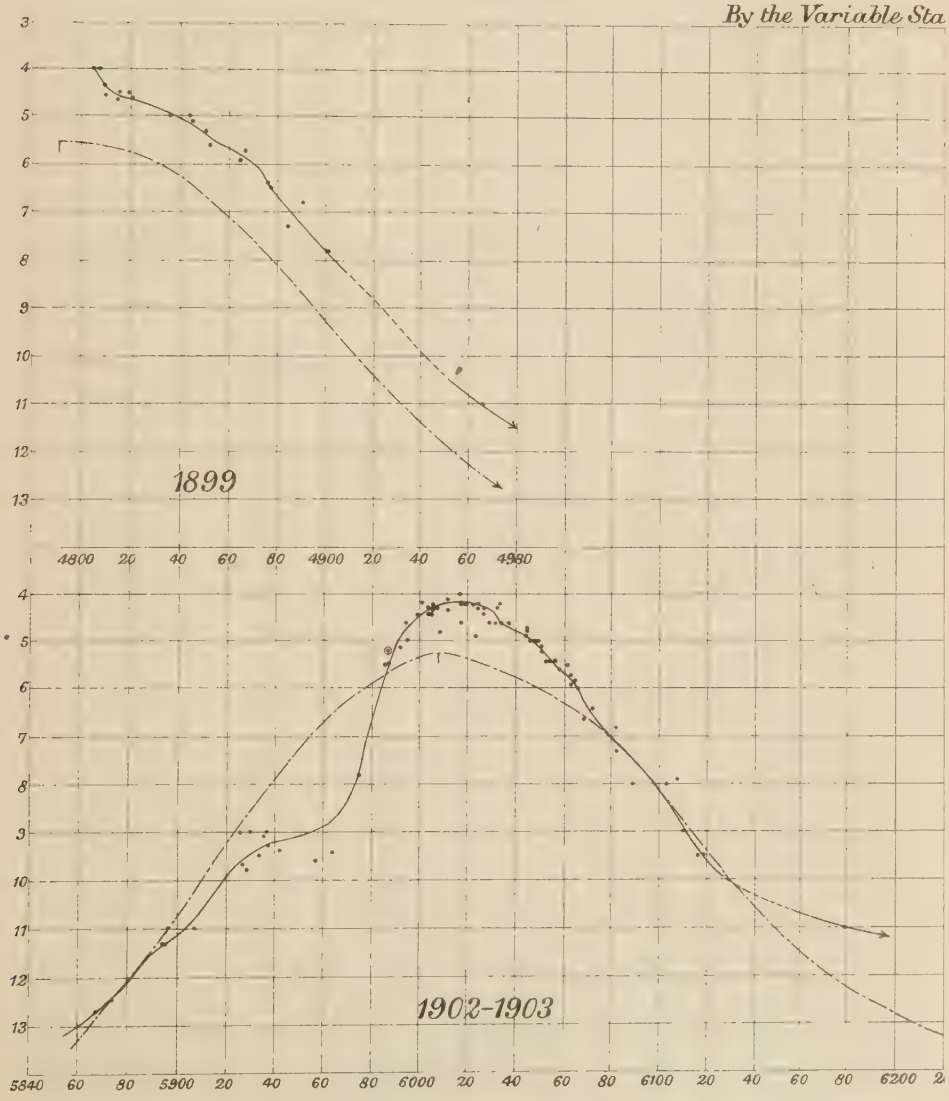
By the Variable Star Section of the British Astronomical Associatio




1902
5720
5860
80
5900
20
40
60
80
6000
20
40
60
6080
4
5
6
7

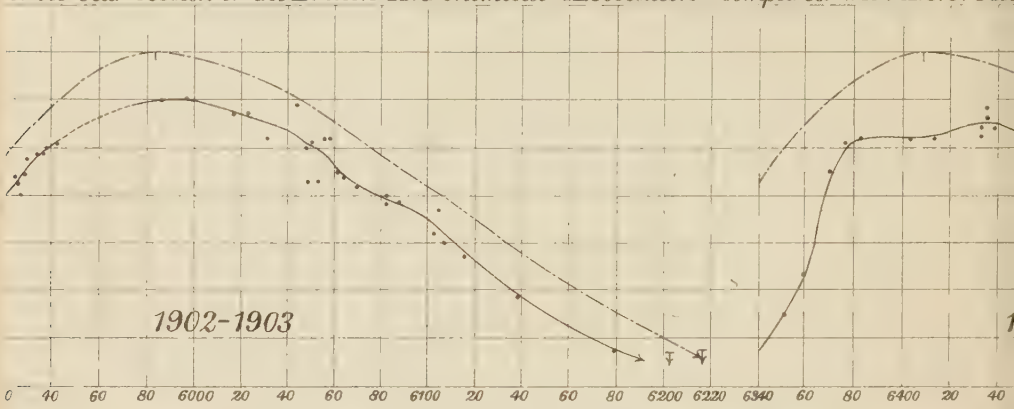

Probably over estimated by Markwick
1902
3920
40
60
80
6000
20
40
60
6080
6800
5
6
7
8
9
10
11
12


By the Va
1901-1902


By the Variable Sta
1899
1902-1903

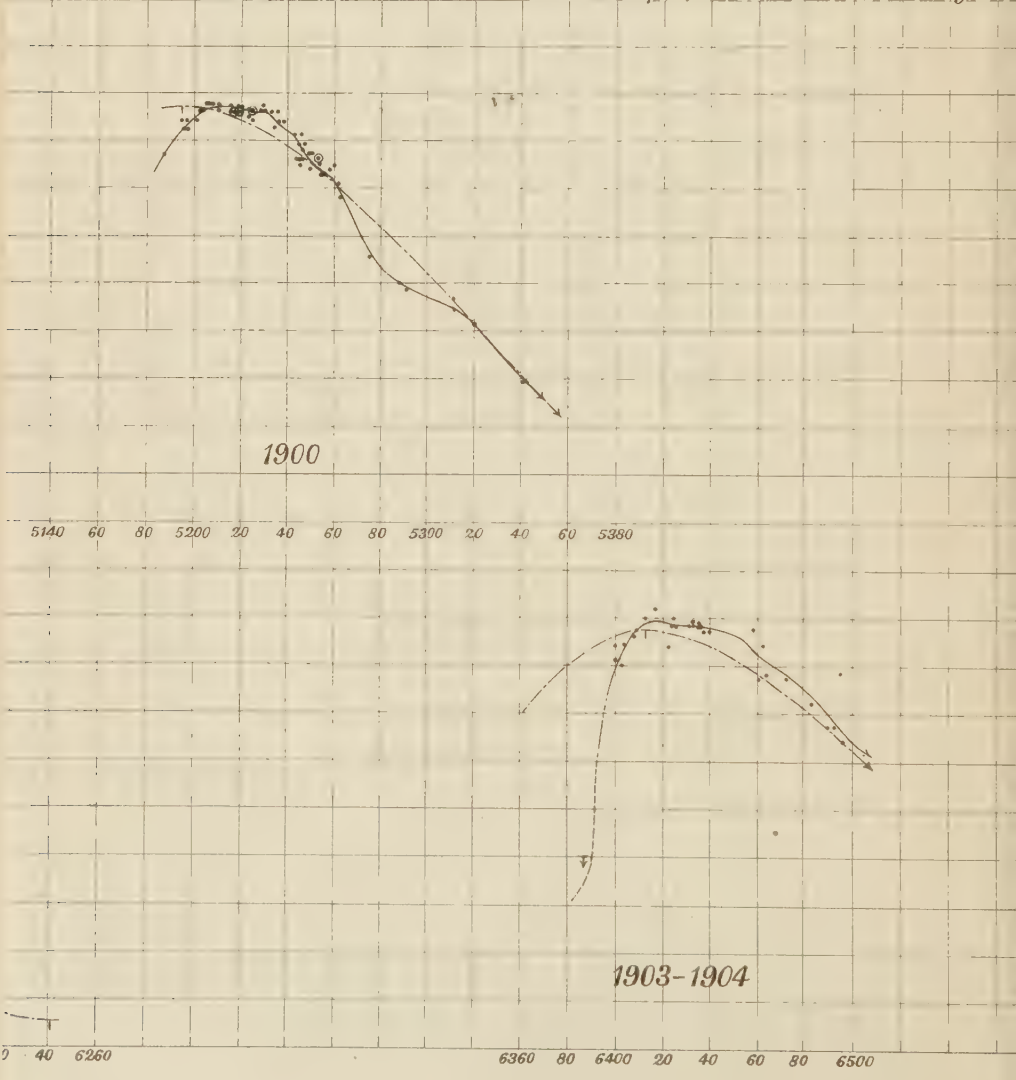
OBSERVATIONS OF (7045) R CYGNI

riable Star Section of the British Astronomical Association compared with H.C.O. Mea

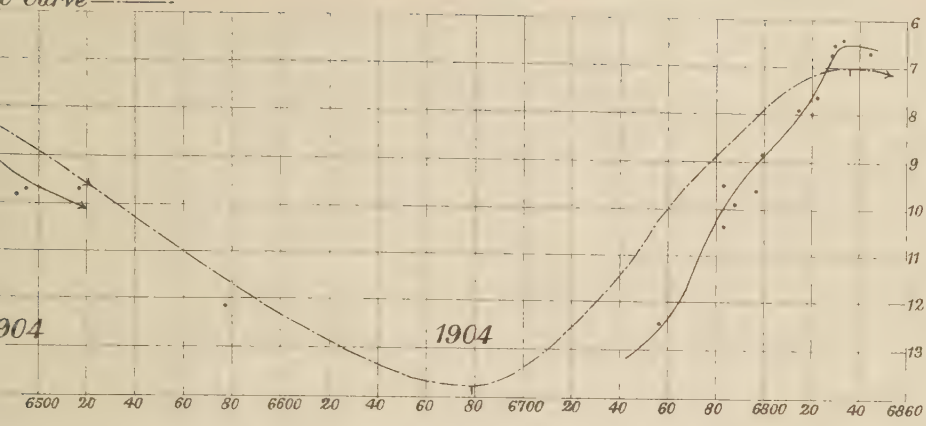


OBSERVATIONS OF (7120) χ CYGNI

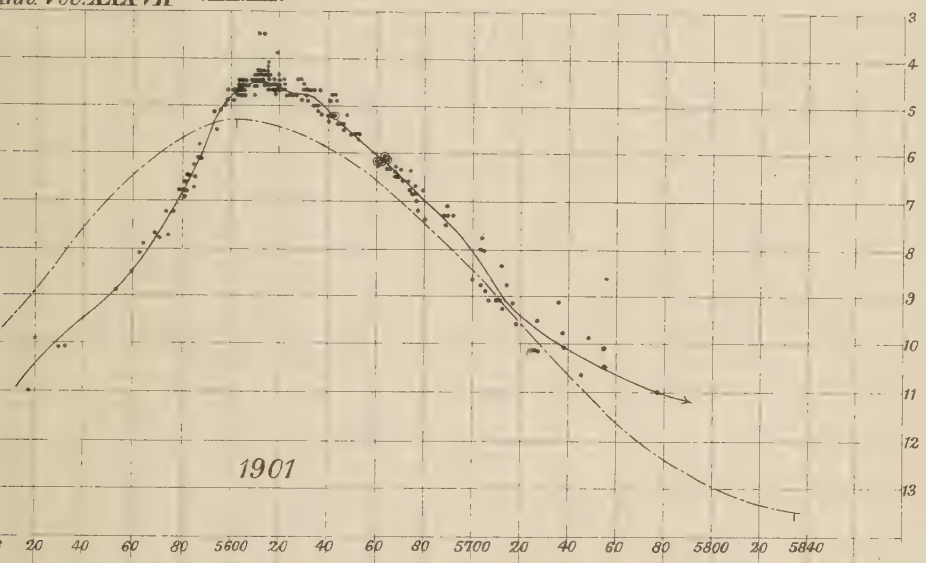
r Section of the British Astronomical Association compared with H.C.O. Mean Light C

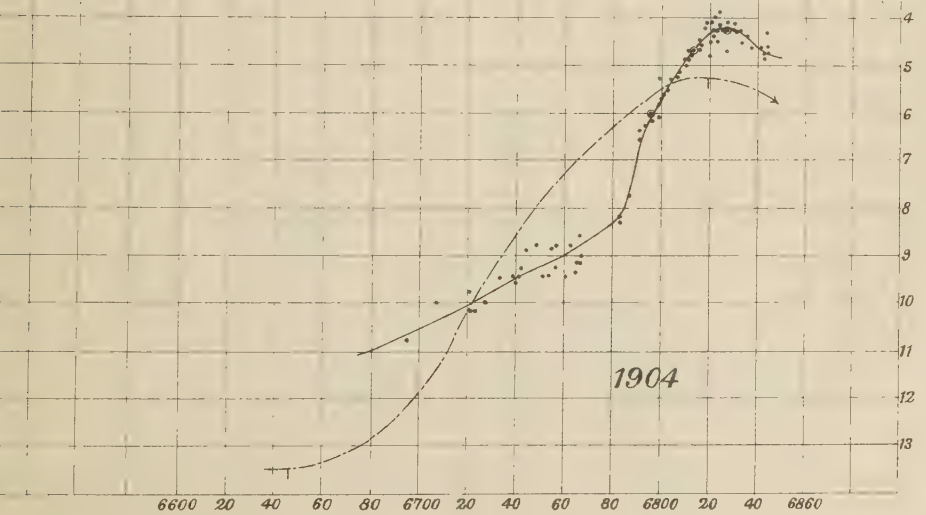


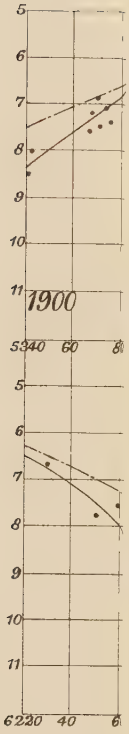
t Curve———.



nn. Vol. XXXVII ———



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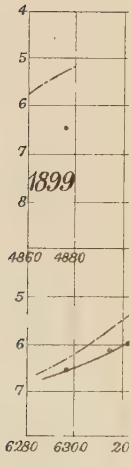
6220
40


4
5
6
7
1899
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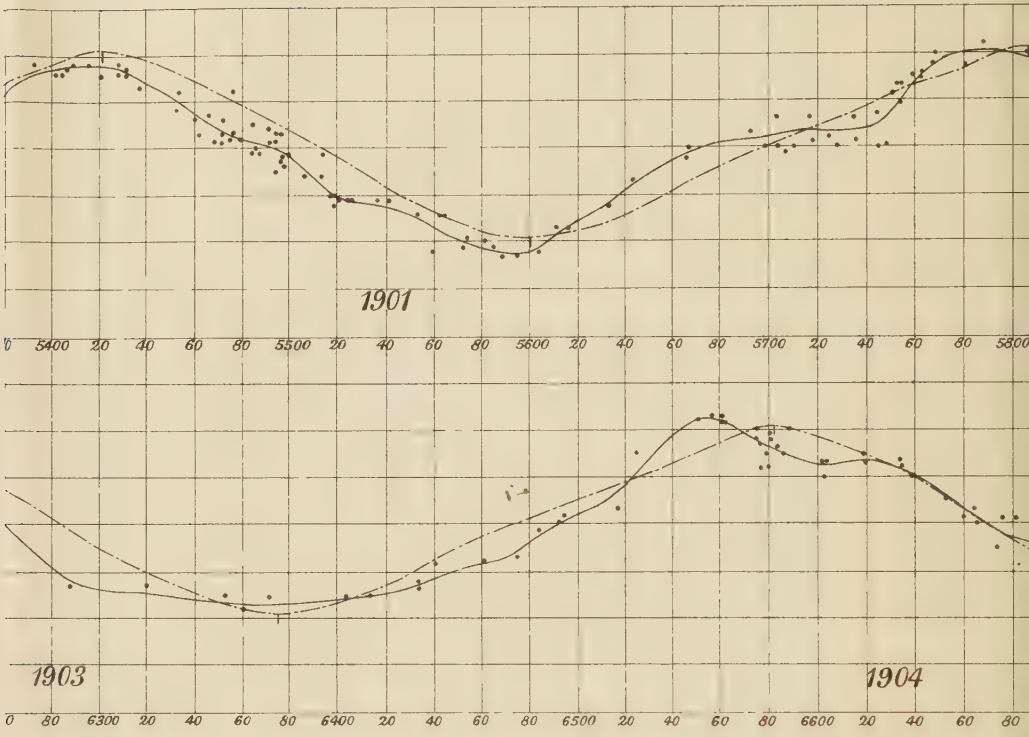
4860
4880
5
6
7
6280
6300

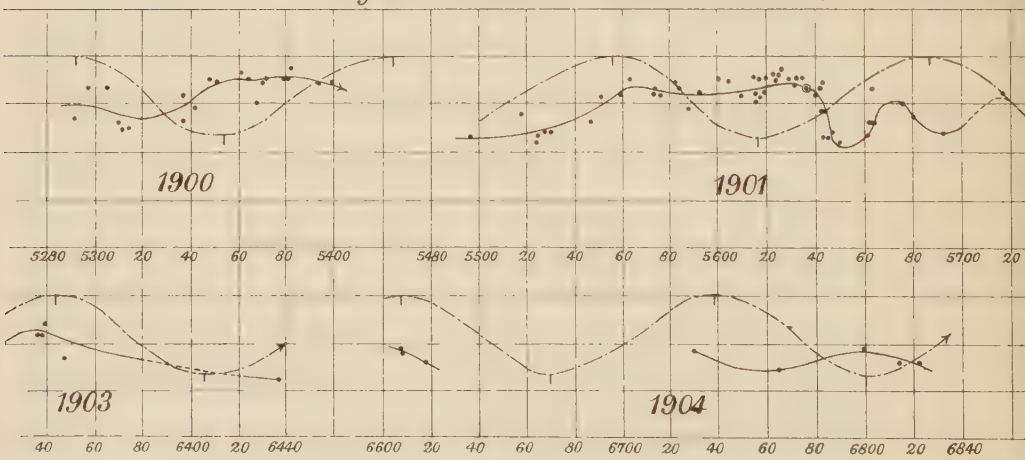
OBSERVATIONS OF (7609)

By the Variable Star Section of the British Astronomical Asso



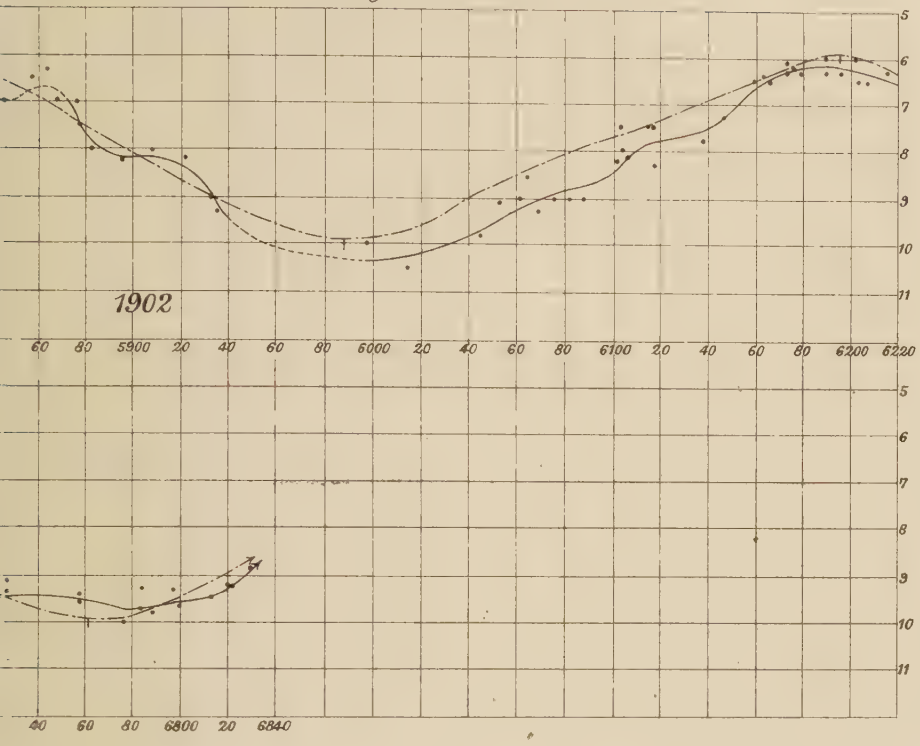
OBSERVATIONS OF (77

By the Variable Star Section of the British Astronomical



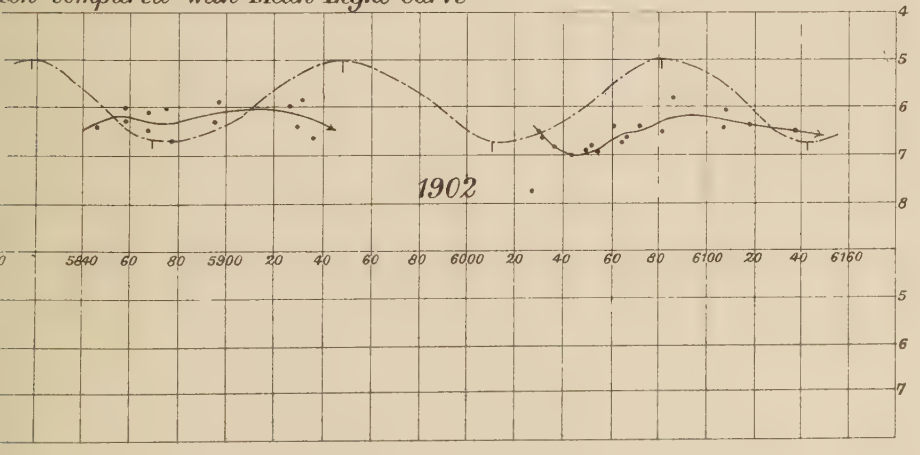
EPHEI

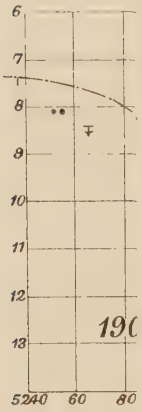
compared with H.C.O. Mean Light Curve — · — · —



CYGNI

ion compared with Mean Light Curve — · — · —




6
7
8
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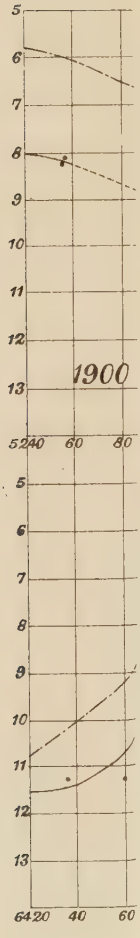
12
13
5240 60 80
190


5
6
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8
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10
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1900
5240 60 80
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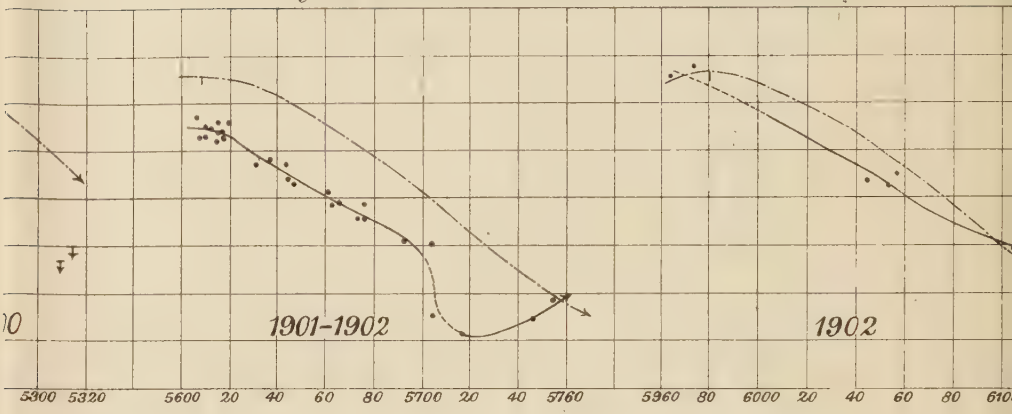
6420 40 60

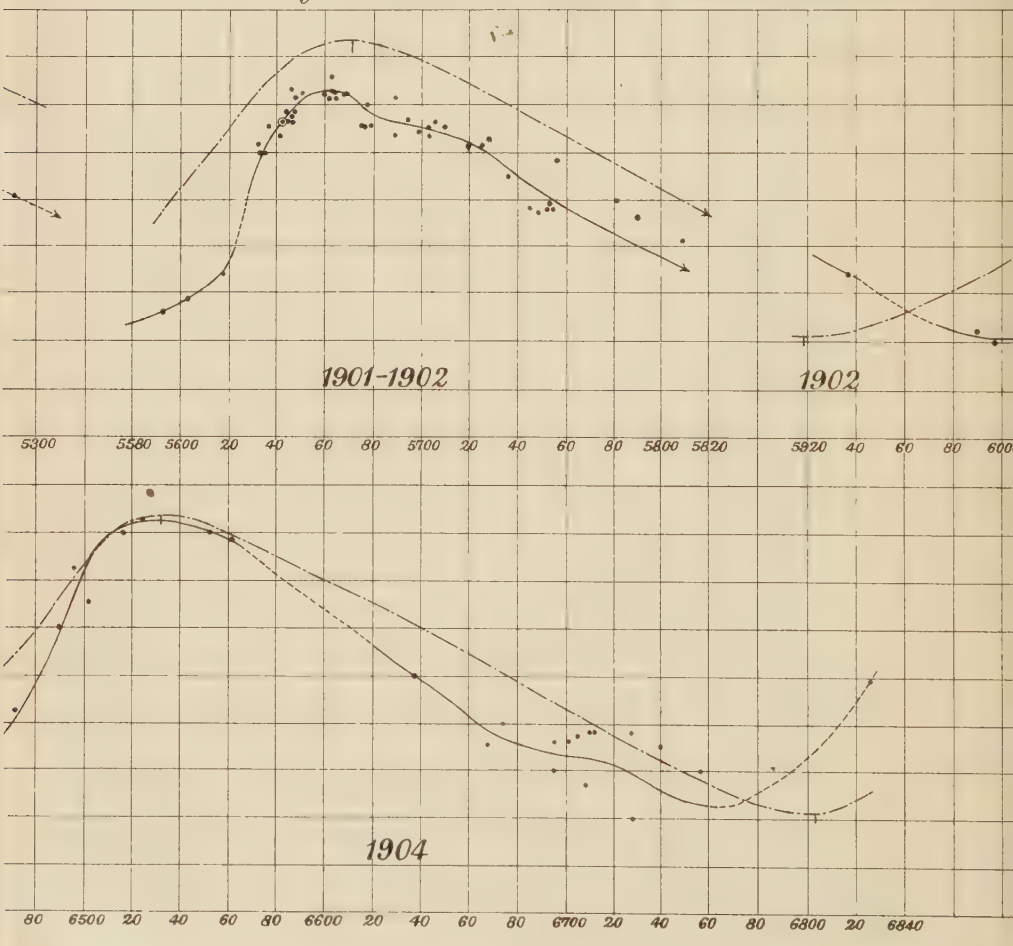
OBSERVATIONS OF (829

By the Variable Star Section of the British Astronomical Assoc



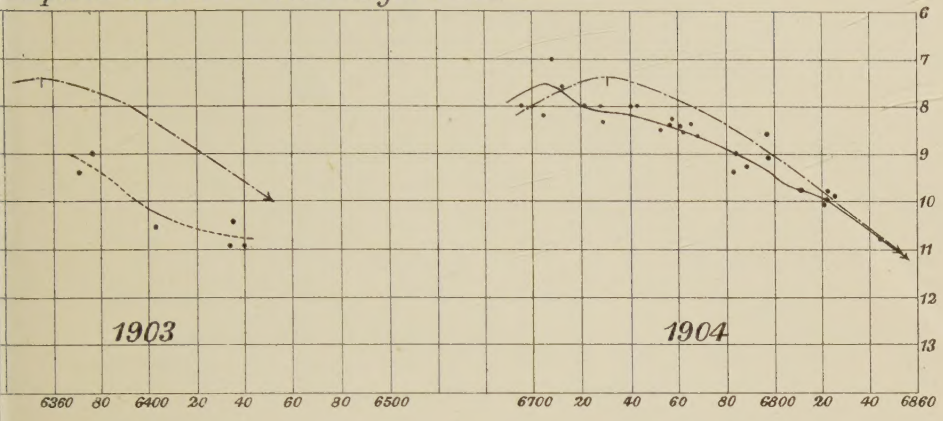
OBSERVATIONS OF (8600)

By the Variable Star Section of the British Astronomical Assoc



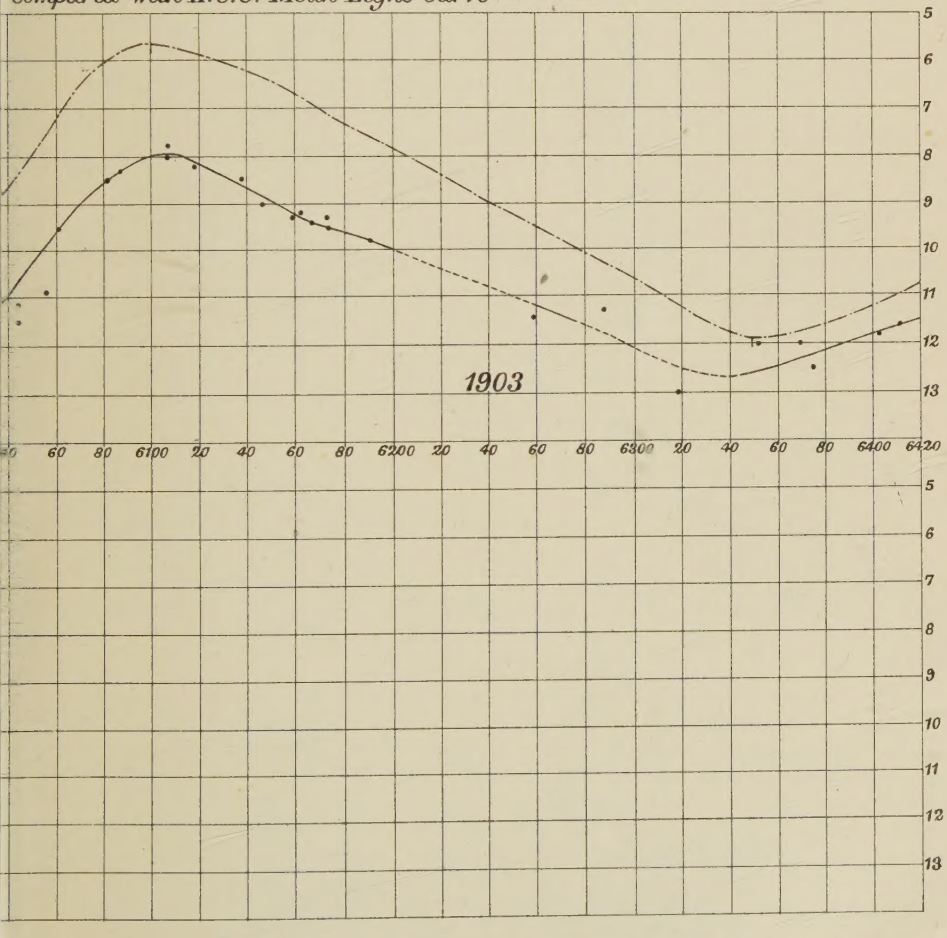
PEGASI

compared with H.C.O. Mean Light Curve —·—·—·



ASSIOPEIÆ

compared with H.C.O. Mean Light Curve —·—·—·



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,, 6.—The Sun	1	6
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,, 6.—Mars	1	6
The Set (unbound)	8	3

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,, 3.—The Sun	1	6
,, 4.—Jupiter.	1	6
,, 5.—The Moon	1	6
The Set (unbound)	6	0

Volume IV.—	s.	d.
Part 1.—Meteors.	0	9
,, 2.—Jupiter	1	6
,, 3.—The Sun	1	6
,, 4.—Mars	1	6
The Set (unbound)	5	3

Volume V.—	s.	d.
Part 1.—Meteors	0	9
,, 2.—Variable Stars	0	9
,, 3.—Jupiter.	1	6
,, 4.—The Sun	1	6
The Set (unbound)	4	6

Volume VI.—	s.	d.
Part 1.—Eclipse Expedition	1	6
,, 2.—Meteors	0	9
,, 3.—Mars	3	0
,, 4.—Jupiter	1	6
,, 5.—The Sun	1	6
The Set (unbound)	8	3

Volume VII.—	s.	d.
Part 1.—Meteors.	0	9
,, 2.—The Sun	1	6
,, 3.—The Moon	1	6
,, 4.—Jupiter	1	6
The Set (unbound)	5	3

Volume VIII.—	s.	d.
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